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CALIFORNIA ~~STATE~~ BOARD OF HEALTH

MONTHLY BULLETIN

Vol. 10

JULY, 1914



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UNIVERSITY OF CALIFORNIA

CALIFORNIA STATE PRINTING OFFICE

THE CALIFORNIA STATE BOARD OF HEALTH.

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REGULAR MEETINGS.

The meetings of the California State Board of Health are held regularly the first Saturday of each month, but the quarterly meetings required by law to be held at the Capitol of the State are ordinarily designated as January, April, July, and October.

By courtesy of the University of California, the Food and Drug Laboratory and the Hygienic Laboratory are located in University buildings at Berkeley, California.

Address all communications to the

SECRETARY, Sacramento, California.

JULY BULLETIN

COMMENTS

Important Health Problems of California.

Tuberculosis—Our greatest source of mortality chiefly because of the influx of tuberculous cases from our Eastern States. There has been a movement started to bond the State for a million dollars to fight this disease, and if this carries the health authorities will be in a much better position to handle this very difficult problem.

Rabies—Shows a slight improvement of late, but the period of this decrease is too short to be sure that it is not merely a matter of chance. Permanent eradication of the disease can not be effected until muzzling ordinances are rigidly carried out in all infected areas.

Typhoid—At least double the number of cases that we would expect, comparing the figures to other states and at the same time considering our excellent drainage conditions and our large, deep, and therefore safe, underground water supply. However the health authorities of this State may strive to prevent the pollution of streams, we can never make the surface water of the State (other than in the high Sierras) safe for drinking purposes. Individuals and communities must either draw their water supply from deep wells or treat the water, after it is taken from the streams and before it is used, by one of the well known methods of purification (as, sand filtration, hyperchlorite, boiling, etc.) Until these measures are carried out generally, we can not expect much decrease in typhoid.

In our smaller towns, where stables are not inspected, nor garbage collected and where the privy is still in use, the fly plays an important part in the spread of this disease, and it will continue to until the authorities of such communities take up fly extermination. Simple as the fact is that practically all house flies are bred in horse manure, and, therefore, if this material were properly handled we would have no flies, it seems almost impossible to spread this information among the general public, although the fact has been published widely for the past twelve years.

Smallpox—A poorly vaccinated community awaiting the time when a virulent form of this disease will again teach the public the value of vaccination.

Plague—Ground squirrels in certain counties are still infected. Much has been accomplished toward their extermination in these areas, but the public should insist that both federal and state governments continue their work for at least two years.

REPORT OF THE BUREAU OF ADMINISTRATION FOR JUNE, 1914.

JOHN F. LEINEN, Director.

A survey of leprosy in California shows that there are twenty-five cases now under county care, seven of these being in Los Angeles, sixteen in San Francisco, and two in Alameda County. One case in San Francisco has been cared for by the county for twenty-four years, others for eighteen, seventeen, fourteen, twelve and eleven years, respectively.

The matter of enforcing a rigid quarantine of cases of leprosy with special reference to those cases which have escaped and have been recaptured, has been acted upon. A leper who escaped from the San Francisco Isolation Hospital last fall has been found in the Los Angeles County Hospital, from which institution he escaped originally. The San Francisco authorities learned that he intends to return to San Francisco shortly, and so informed this office. The Los Angeles County Hospital authorities, and the Los Angeles board of supervisors, have been asked to take all precautionary measures possible to prevent the further escape of this patient. Another leper who escaped from the San Francisco Isolation Hospital has been discovered in Missouri. This man is able to travel all over the country, and the matter of confining him in the institution where he is now located has been taken up with the state health authorities of Missouri, and with the United States Public Health Service.

Among the more unusual diseases that occurred during June are a fatal case of beri-beri in a Japanese woman at Vacaville, a fatal case of human anthrax at Calexico, and two cases of pellagra in Tulare County.

A case of human plague was discovered at Walnut Creek. The patient, who lives in Walnut Creek and who travels to San Francisco every day, became ill on May 17th. He was visited by Assistant Surgeon N. E. Wayson and Medical Inspector T. G. Howe. The case was found to be a mild, atypical case of bubonic plague. The patient recovered and is now able to be up and about. The source of infection was undoubtedly due to ground squirrels, as the patient had been engaged in cutting hay on squirrel-infested land. He had shot and skinned squirrels within the two weeks previous to his illness. Dr. W. A. Sawyer, Director of the State Hygienic Laboratory, confirmed the diagnosis. Efforts to exterminate the squirrels in this vicinity have been concentrated.

Letters have been sent to all County Health Officers, and to Health Officers in all cities of less than twenty thousand population, informing them that the State Hygienic Laboratory is now equipped to make tests for Wassermann reactions for all citizens living in cities of less than twenty thousand inhabitants, who are unable to pay for such tests, upon proper certification of the attending physician, and upon recommendation of the Health Officer.

In Oakland, a boy who has been traveling about the State with a carnival company was found to have smallpox. The boy had been sick in Rio Vista, and had stopped recently in Santa Clara and in

Sausalito. The Health Officers of these cities were requested to fumigate rooms in hotels where this patient had slept, and to take all necessary precaution for preventing any outbreak.

Quarantine for rabies in portions of Sonoma County was raised upon June 4th, the quarantine period having expired.

Upon June 8th an examination of the brain of a cow, sent to the State Hygienic Laboratory from a ranch in Marin County, a short distance from Petaluma, showed the presence of many Negri bodies. Three cows and a hog upon this ranch also showed clinical symptoms of the disease. The County Health Officer has been instructed to investigate, and to report further in the matter.

The board of supervisors of San Diego County has requested the State Board of Health to establish a branch of the State Hygienic Laboratory at San Diego, for the purpose of making bacteriological examinations, administering Pasteur treatments, etc.

A family of Mexican refugees from Guaymas, landed in San Diego early in June, bringing with them a dog proven rabid by the San Diego City Bacteriologist. This animal bit six persons before it was killed. The matter was taken up with the United States Public Health Service, and with the Bureau of Animal Industry of the Department of Agriculture. The Bureau immediately enforced Regulation 13, Order 180, which prevents the importation of dogs from Mexico into the United States.

A dog in Dunsmuir became rabid June 26th, and bit at least six other dogs. All animals known to have been bitten are confined, and the board of city trustees has called a special meeting for the purpose of passing a muzzling ordinance.

The Health Officer of Fresno notified the Board of complaints received regarding the insanitary conditions surrounding the dwellings of certain Greeks in the mountain country, twenty-five miles from Fresno. These Greeks being engaged in the manufacture of cheese from sheep's milk, the Health Officer requested that the Board send an inspector to investigate. This matter has been referred to Professor Jaffa for action.

The Director of the Hygienic Laboratory has filed copies of the analyses of the following water samples: Santa Fe Railway's water supply; supply of the Sierra Railway Company of California; supply of the McCloud River Railroad Company; Southern Pacific Company's supply taken from well near San Joaquin River drawbridge; Western Pacific Railroad Company's supply taken from well at First and Linden streets, Oakland and the company's well at Stockton; samples from the Errin Heights Water Company and the Kinney Water Company of Venice; water supply of Saint Helena; Calistoga; Tracy; Riverbank; Kinney School of Sacramento; Los Banos; Jackson; Ione; Sutter Creek, and Napa City.

Dr. Simpson, County Health Officer, of Santa Clara County, reported the pollution of the water supply of San Jose by a person who conducts a summer resort above Wrights, and has dammed up part of the creek, which carries the water supply, for a swimming pool. Dr. Simpson was instructed to consult with the district attorney relative to the abatement of this nuisance.

Report was received from Contra Costa County to the effect that a

resident was polluting a portion of the watershed of the Peoples Water Company. The Health Officer was instructed to investigate this complaint and filed a report stating that the party had dammed up part of the San Pablo Creek for a swimming pool and he was unquestionably polluting the water supply. The County Health Officer was then instructed to place this matter before the district attorney and to urge the enforcement of the law.

Complaint was received from a resident of San Francisco to the effect that on three successive Sundays, while fishing in Marin County, he had noticed the carcass of a dead cow lying in Mill Creek. The County Health Officer's attention was called to this condition, and he reported a few days later that the cow had been removed.

A supplemental report on the Benicia watershed was received from Dr. S. G. Bransford, County Health Officer. Dr. Bransford reported that one man, residing on the watershed, had refused to make the repairs recommended by the inspector for the Board, and when approached by Dr. Bransford's inspector had driven him off the premises and threatened his life. Dr. Bransford has been instructed to turn this matter over to the district attorney of the county.

Complaint was received from Mrs. H. Gill, living just outside of Pasadena, stating that the sewage from the La Vina Sanatorium is permitted to run down the hillside into the Arroyo Seco. The County Health Officer was instructed to investigate this complaint, and to report to this office. The Health Officer's report was received subsequently and it appears that the complaint was based upon some neighborhood differences.

Application has been received from the Alturas school trustees for permission to build a septic tank, the effluent from which will empty into the Pitt River.

Application has been received from the city of Stockton for permission to empty its sewage into the San Joaquin River.

The State Fish and Game Commission has conferred with the Board relative to the pollution of Guadalupe Creek, Santa Clara County, by the refuse from the Alvarado sugar factory. Examinations of the water in the creek were made at the State Food Laboratory. This matter had previously been brought to the attention of the Board by the South Bay Yacht Club and was referred to the County Health Officer of Santa Clara County for investigation. The Health Officer reported that a break had been found in the company's sewer pipe which crossed the creek. This has been repaired and no further trouble is looked for.

Complaints were received from E. L. Barber, inspector in the United States Public Health Service, and from a resident of Livingston, Merced County, relative to the meat supply received from San Francisco. Professor Jaffa has been instructed to place two inspectors in San Francisco to investigate the meat supply of San Francisco.

Professor Jaffa was instructed to have an inspector come to Sacramento to take samples of carbonated waters, cornucopias, ice creams, etc., manufactured here. He has detailed Inspector Gourley for this work.

A petition has been received from a number of residents of Richmond protesting against the water supplied by the McEwen Brothers Water

Company, and requesting that an analysis be made by the State Hygienic Laboratory to ascertain the amount of contamination present. Dr. Sawyer has been instructed to forward the necessary containers for shipping samples.

The executor of the estate of the late J. P. Andrews has made formal application to the Board for permission to dispose of the effluent from a septic tank into the Pacific Ocean opposite the town of El Pismo, San Luis Obispo County. This application has been referred to the Consulting Engineer for investigation.

Sanitary Inspector E. T. Ross has made the following investigations during the month and has reported thereon. These reports are on file in the office of the Board: The towns of Galt; Ione; Jackson; Sutter Creek; Napa; Calistoga; St. Helena; Grass Valley; Rocklin, and Southern Pacific Trains numbered 17, 18, 34, 62, 167, 210 and 314.

Sanitary Inspector Ross reported that he noticed in several instances in a number of large hotels throughout the State, that the same finger bowl was served to five or six persons without being washed, and in some cases, they wiped the finger bowls with a napkin which they use for dusting off chairs, etc. He also reported that he noticed in one of the large barber shops of Sacramento, that one hot-face towel is provided for each barber and that this towel is used on the face of every customer whom he shaves during the day, there being no effort whatever to sterilize them after each use.

REPORT OF THE BUREAU OF TUBERCULOSIS FOR JUNE, 1914.

BURT F. HOWARD, M.D., Director.

During the month of June a standard form for reporting tuberculosis was adopted by the State Board of Health and printed on a card of the size of an ordinary postal card. The form is as follows:

CALIFORNIA STATE BOARD OF HEALTH Bureau of Tuberculosis

REPORT OF A CASE OF TUBERCULOSIS

The State Law requires you to report all cases of Tuberculosis. Write plainly with non-fading ink.	Name of patient_____		Age_____	Sex_____	{ Single Married Widowed Divorced Separated
	Street and No._____		City_____	County_____	
	Previous address_____		Home address_____		
	Dwelling: detached, flat, tenement, boarding, hotel, hospital, other_____				
	Housing: good, fair, poor. Financial condition: independent, wage earner, indigent.				
	Occupation_____yrs.____mos.____Occupational conditions: good, fair, poor.				
	Former occupation_____yrs.____mos.____				
	Nativity: State_____Foreign_____Race or Color_____				
	How long resident of Cal.?_____City?_____County?_____				
	Family: No. persons____Has family received sanitary instructions?_____				
	Tuberculosis: in father, mother, brothers____, sisters____, husband, wife, children____, others____				
	Bacteriological examination T.B., pos.____, neg.____, by whom_____				
Approximate date of Diagnosis_____Prognosis_____Result_____					
Physician's signature_____Date_____					

NOTICE.—The attending physician will fill out the above form and return to the local health authority for transmission to the State Board of Health.

These cards will be distributed to Health Officers throughout the State, who will in turn distribute them to physicians or else have similar cards printed on return postal cards, if such a method of collecting morbidity report is in use at present.

The reason for adopting this form was, primarily, to conform to the law requiring "the complete and proper registration of all tuberculous persons within the State," and before devising the card a study was made of the methods used in the larger cities of the State and of forms used in several other states.

By underlining certain words, or drawing a line through words not needed, very little writing is necessary to give a report which will supply much useful information to the department.

Up to the present time complete reports have not been submitted; in some cases only the total number of tuberculous persons being returned to this office. However, approximately two thousand names and addresses have been reported since January, 1913, and these have now been transcribed upon cards, for the purpose of making a study of the location and migration of individuals, eliminating the records of those who have died and bringing the files up to date.

If physicians will cooperate in making this registration complete the card index will be of great value in the future work of the Bureau.

During the month, inspection was made of the Dispensary of the

San Francisco Association for the Study and Prevention of Tuberculosis, at 1547 Jackson street, San Francisco.

Under special instruction from the Board of Health, the Director of the Bureau of Tuberculosis attended the Surgeon General's Conference, June 18th, a meeting of State and Territorial Boards of Health, June 19th and 20th, and a conference with the Commissioner of Indian Affairs, June 20th, in Washington, D. C.; and the annual meeting of the American Medical Association, June 22d, in Atlantic City, New Jersey.

Following this he made an investigation of the methods used in Pennsylvania for the control of tuberculosis, including an inspection of the three state sanatoria, numerous dispensaries, and a study of methods in use in the central offices at Philadelphia and Harrisburg. Conferences were held with officers of the National Association for the Study and Prevention of Tuberculosis at New York, and with prominent officials and workers in Massachusetts, New York, Illinois and Colorado, and also inspections made of hospitals, dispensaries and of methods used in these states for the treatment or control of tuberculosis.

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR JUNE, 1914.

ANNA C. JAMMÉ, Director.

The period allowed by law whereby a graduate nurse may be registered without examination closed on July 1st. From the establishment of the Bureau, October 4, 1913, until July 1, 1914, four thousand eight hundred and fifty-two applications for certificate as registered nurse have been received. Up to the present date 4,831 licenses to practice as registered nurse and use the letters "R.N." appended to the name, have been issued.

The law provides a penalty for those who violate this right:

Section 7. It shall be unlawful for any person not holding a certificate of registration issued by the State Board of Health to use the title "Registered Nurse," or the letters "R.N." in connection with or following his or her name, or to impersonate in any manner, or pretend to be, a "Registered Nurse."

The work of the Bureau will now be very largely directed to the inspection of training schools for nurses. Reports will be submitted to the State Board of Health, whereby the schools will be accredited.

A report of occupational statistics shows that 100,000 women are practicing nursing in the United States, only one out of ten being hospital trained. Ninety per cent, then, of all women calling themselves nurses are without preparation. Statistics bearing on this fact have not as yet been obtained in this State.

According to the provisions of this act, the State Board of Health will hold an examination every six months. The first examination will, therefore, be held six months following the period of the waiver. Public notice of these examinations will be given at least two weeks prior to the date of holding the same in two papers of general circulation and in one nursing journal.

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR JUNE, 1914.

WILBUR A. SAWYER, M.D., Director.

J. C. GEIGER, M.D., Chief Bacteriologist.

The blood of persons who have received typhoid vaccination, when submitted to the Widal test for typhoid fever, will give a positive reaction, as one of the signs of immunization. This reaction may be present within one or two weeks of the vaccination, and may last for over a year. This fact renders the Widal test in previously vaccinated persons of little diagnostic significance, a fact which must be borne in mind when the results of laboratory tests are interpreted. Physicians, who send blood for the Widal test from patients who have been vaccinated against typhoid fever, should state the date of the vaccination and the source of the vaccine. This will prevent a positive Widal reaction from being erroneously regarded as proof of the presence of typhoid fever. Since the Widal reaction can not prove the presence of typhoid fever in a vaccinated person, the physician who thinks that he has one of those rare cases in which typhoid fever is contracted in spite of vaccination, should make a blood culture. The State Hygienic Laboratory in Berkeley will furnish sterile bile and a mailing outfit for this purpose to any physician who will write for it. The test should be done as early as possible, as it is most reliable during the first week of the disease.

The technic is very simple. About fifteen drops of blood from the lobe of the ear or a vein in the arm are allowed to flow or drip into the sterile bile. Precautions to avoid contamination must be observed. If the blood is drawn from the ear, the lobe should be first washed in 70 per cent alcohol and allowed to dry. The culture should be sent at once to the State Hygienic Laboratory to be incubated and examined.

Persons who are vaccinated during the incubation period of typhoid fever not infrequently develop the disease in spite of the vaccination, as it takes several weeks for the height of the immunity to be reached.

A Human Case of Plague.

On May 17th a man at Walnut Creek became sick with symptoms suggesting bubonic plague. An investigation by the United States Public Health Service showed that the disease was bubonic plague, and that it had probably been contracted from ground squirrels. Material was sent to the State Hygienic Laboratory for examination. The plague bacillus was isolated from the material and identified.

Division of Biological Examinations.

Summary of Examinations Made in the California State Hygienic Laboratory
During the Month of June, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----				1
Diphtheria -----	13	16	4	33
Gonococcus infection -----			1	1
Malaria -----		1		1
Plague -----	1			1
Rabies -----	12	17	1	30
Syphilis (Wassermann test) -----	23	29	17	69
Tuberculosis -----	6	14		20
Typhoid (Widal test) -----	2	25		27
Typhoid (blood culture) -----		1		1
Water pollution -----	19	22		41
Miscellaneous -----	5	3		8
				233
Northern Branch at Sacramento:				
Diphtheria -----	12	21	2	35
Malaria -----	2	4		6
Tuberculosis -----	3	14		17
Typhoid (Widal test) -----	12	31		43
				101
San Joaquin Valley Branch at Fresno:				
Diphtheria -----	1	5		6
Tuberculosis -----	1	2		3
Typhoid (Widal test) -----		9		9
				18
Southern Branch at Los Angeles:				
Diphtheria -----	32	78	5	115
Tuberculosis -----	4			4
Typhoid (Widal test) -----	1	19	1	21
				140
Total number of examinations -----				492

Division of Preventive Therapeutics.

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory
During the Month of June, 1914.

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley -----	6	8
Northern Branch at Sacramento -----	1	1
San Joaquin Valley Branch at Fresno -----	1	0
Southern Branch at Los Angeles -----	1	0
Laboratory of Sacramento Board of Health, by deputized bacteriologist -----	1	1
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	2	5
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	4	3
Laboratory of San Diego City Board of Health, by deputized bacteriologist -----	4	1
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	0	0
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist -----	0	0
	20	19

Vaccine for the Prevention of Typhoid Fever Issued by the State Hygienic Laboratory During the Month of June, 1914.

Number of physicians to whom vaccine was sent.....	59
Number of complete treatments sent.....	442

Public Health Instruction.

Participation in Instruction in Public Health During June, 1914.

Main Laboratory at Berkeley:	
Bacteriological instruction outfits sent out.....	0
Bacteriological instruction outfits in use.....	27
Lectures or talks by the Director.....	0

Division of Epidemiological Investigations.

Epidemiological Investigations During June, 1914.

Main Laboratory at Berkeley:	
Special investigations by the Director.....	1
Investigation, by physiological tests, of the strengths of tinctures of digitalis and strophanthus found in the market. (In cooperation with the State Food and Drug Laboratory.)	
Special investigations by the Director and Chief Bacteriologist.....	1
Investigation of cultures from a human case of bubonic plague at Walnut Creek.	
Special investigations by the Chief Bacteriologist.....	1
Continuation of an investigation into the bacterial contents of tomato products.	

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR JUNE, 1914.

M. E. JAFFA, Director.

During the month of June, six hundred and ninety-four samples were received at the State Laboratory. Four hundred and ninety-eight of these were samples sent in by state institutions for the purpose of ascertaining the best values submitted by bidders on state contracts. Besides the food and drug supplies, the state institutions frequently submit other materials for examination, such as soap, blankets, cutlery, etc., in order to determine whether or not they conform to specifications.

A large number of drugs are included in the official samples. These are mostly galenical preparations and a great many of them are materially below the U. S. P. standard. Several samples of sweet spirits of nitre were more than 50 per cent below standard. The same is true of aromatic spirits of ammonia.

A few samples of spices were decomposed and worm eaten, the samples being very old. The meat samples, especially chopped meat, show that many butchers are making use of sodium sulfite for preserving this product. It has repeatedly been called to the attention of the butchers of this State that preservatives containing sulfite are illegal in meats and meat-food products.

The following extracts from the Service and Regulatory Announcements of the Department of Agriculture, for April and May, 1914, are of interest to the readers of this bulletin and others interested in the manufacture and sale of food and drugs.

Fermented apple cider products.

DEAR SIR: The attention of this bureau has been called to numerous products made from apple cider as a base, to which have been added water, sugar or glucose, and flavoring. Many of these products have been found to be fermented and to contain as much as 10 per cent alcohol.

In many cases the labels used on these products give the impression that the products are pure apple cider, which has been sweetened with sugar, and other statements are sometimes added which convey the impression that the contents of the package are a sweetened, unfermented apple cider.

In the opinion of the bureau, such labeling is in violation of the Food and Drugs Act, and these products should be plainly labeled to indicate their true nature and the fact that they are fermented beverages.

Respectfully,

C. L. ALSBERG, *Chief*.

The use of agar-agar in food products.

DEAR SIR: In reply to your question regarding the use of Japanese kanten or agar-agar in food products, you are informed that there appears to be no objection to the use of this product, if properly purified.

It does not appear that the term "vegetable gelatin" is a correct designation for this product, as agar-agar is not a gelatin and can not be considered a substitute for it except in its power to form a jelly with water.

Respectfully,

C. L. ALSBERG, *Chief*.

The use of cocoa dust or "fines" in the manufacture of cheap chocolate.

DEAR SIR: The attention of the bureau has been called to the use of so-called cocoa dust or "fines" in the preparation of cheap chocolates. A certain proportion of this material, which consists of the finest particles of the nibs, together with a large percentage of small fragments of shell, and, in some cases, foreign matter of the nature of dirt and sand, is mixed with the ground, clean cocoa nibs. Many manufacturers subject the dust to a cleaning process which is supposed to remove a considerable proportion of the shell and foreign matter. As a matter of fact, analyses made by the Bureau of Chemistry indicate that the cleaning process is often practically without effect, and, in fact, in some cases the amount of cocoa material is less after cleaning than before.

In view of these facts, the bureau is of the opinion that the use of cocoa dust or "fines" in the manufacture of chocolate goods is objectionable and should be entirely discontinued until a more satisfactory method of cleaning the product is found.

Respectfully,

C. L. ALSBERG, *Chief*.

Cocaine and cocaine preparations intended for export.

DEAR SIR: Your request for information relative to requirement of declaration for goods containing cocaine which are shipped abroad is at hand. In reply you are informed that in case cocaine or cocaine preparations are exported it will not be necessary to obtain a declaration, but in lieu thereof it will be necessary to keep on file foreign orders for such goods, and it will furthermore be necessary to indicate on the report in January of each year the amount of cocaine and cocaine preparations purchased, the amounts exported, and the amount used or sold within the United States. This is required simply to keep a complete record of all cocaine and cocaine preparations handled in the United States.

Respectfully,

C. L. ALSBERG, *Chief*.

Individual guaranties required by Food Inspection Decision No. 153.

Regulation 9 of the Rules and Regulations for the Enforcement of the Food and Drugs Act (Food Inspection Decision No. 153) requires that guaranties, filed with this department, shall be stricken from the files on May 1, 1915, and that serial numbers assigned thereto shall not be used on the label or package of any food or drug after that date.

This regulation contemplates that on and after May 1, 1915, guaranties, if given with respect to any article of food or to any drug, shall not appear on the label or package, but shall be incorporated in or attached to the bill of sale, invoice, bill of lading, or other schedule, giving the names and quantities of the articles. If the goods are properly described in the bill of sale or other document, they may be referred to in the guaranty as listed in the bill of sale or other document, without repetition of the detailed description. Guaranties may be written, printed, or stamped on the bill of sale or other document, and, in order to afford protection, must conform to paragraph (d) of the regulation.

Filing of guaranties and issuance of serial numbers prior to May 1, 1915.

Regulation 9 of the Rules and Regulations for the Enforcement of the Food and Drugs Act (Food Inspection Decision No. 153) provides that guaranties, filed with the Department of Agriculture, shall be stricken from the files on May 1, 1915, and the serial numbers assigned thereto shall not be used on the label or package of any food or drug after that date. It is believed accordingly that manufacturers and dealers will prefer to guarantee their goods in accordance with paragraphs (d) and (e) of the regulation, rather than to submit general guaranties and request serial numbers, which can not be used after May 1, 1915.

"In package form."

Representations have been made to the department that certain articles of food are not "in package form" within the meaning of the Food and Drugs Act, as

amended by the act of March 3, 1913 (37 Stat., 732). It is the view of the department that the meaning of the phrase "in package form" is so clear that manufacturers and dealers will have little difficulty in determining whether or not articles of food in which they deal are included within it. If doubt arises in administering the law whether individual articles of food or classes of foods are "in package form," the department will determine the question, for administrative purposes, upon the facts in each case.

The following Food Inspection Decision has been received at the Laboratory since the publication of the last monthly bulletin:

Food Inspection Decision No. 155.

CHANGING EFFECTIVE DATE OF FOOD INSPECTION DECISION NO. 153, WHICH AMENDS REGULATION 9, RELATING TO GUARANTIES BY WHOLESALERS, JOBBERS, MANUFACTURERS, AND OTHER PARTIES RESIDING IN THE UNITED STATES, TO PROTECT DEALERS FROM PROSECUTION.

The effective date of Food Inspection Decision No. 153, issued May 5, 1914, is hereby postponed until May 1, 1916; *provided*, That as to products packed and labeled prior to May 1, 1916, in accordance with law and with the regulations in force prior to May 5, 1914, it shall become effective November 1, 1916; *and provided further*, That compliance with the terms of Regulation 9 of the Rules and Regulations for the enforcement of the Food and Drugs Act as amended by Food Inspection Decision No. 153 will be permitted at any time after the date of this decision.

General information concerning Food Inspection Decisions 153 and 155, amending Regulation 9 of the Rules and Regulations for the Enforcement of the Federal Food and Drugs Act, relating to guaranties.

GUARANTY LEGENDS ON PACKAGES.

The purpose of regulation 9, as amended by F. I. D. 153 and F. I. D. 155, is to prevent the use upon the label or package of any food or drug of a statement which, in any way, might be construed as implying that the article of food or drugs has been guaranteed or approved by the Government. The guaranty legend "Guaranteed by _____, under the Food and Drugs Act, June 30, 1906," or any similar guaranty legend, should not be used on products packed or labeled on or after May 1, 1916. On and after November 1, 1916, no such guaranty legend should appear on any article of food or drugs while in the channels of commerce described in the Federal Food and Drugs Act. In the opinion of this department, it would not constitute a sufficient compliance with the regulation if only the serial number issued by this department should be blotted out from the guaranty legend heretofore in common use. The use of the words "under the Food and Drugs Act of June 30, 1906," should also be discontinued, and any statement to the effect that the article is guaranteed should contain no reference to the United States or to the Department of Agriculture.

No objection, however, would be made by this department to a statement, if true, that the guarantor himself guarantees the contents of the package to be pure, wholesome, or free from adulteration; nor, in the opinion of the department, would it constitute a violation of the regulation if it were stated, in substance, that the article is warranted by the manufacturer, or other designated person, to comply with the requirements of all state laws, or of the laws of certain named states.

TIME OF TAKING EFFECT.

Food Inspection Decision 153 was supplemented, on May 29, 1914, by Food Inspection Decision 155. The last-mentioned decision postpones the effective date of the new regulation until May 1, 1916, except that, as to goods packed and labeled prior to May 1, 1916, in accordance with law and with the regulations in force prior to May 5, 1914, it further postpones the effective date of the regulation until November 1, 1916; *provided, however*, that compliance with the terms of Regulation 9 as amended will be permitted at any time hereafter.

Under Food Inspection Decision 153 and 155 it will not be necessary to wait until May 1, 1916, to remove the serial number and guaranty legend from packages of food or drugs, but the use of either the serial number or the guaranty legend may be discontinued at any time. In that event, however, in order for guaranties under the Federal Food and Drugs Act to afford the dealers protection from prosecution under the act, all the requirements prescribed in Regulation 9, as amended by Food Inspection Decision 153, should be complied with.

EFFECT OF AMENDMENT ON GUARANTIES FILED UNDER PRESENT REGULATION NINE.

It is not intended that the provision in paragraph (a) of Food Inspection Decision 153, which states that—

All guaranties now on file with the Secretary of Agriculture shall be stricken from the files, and the serial numbers assigned to such guaranties shall be canceled. shall affect the validity of such guaranties in respect to the particular articles of food or drugs covered thereby which have been sold or delivered by the guarantor to his vendee prior to the date when such guaranties shall have been stricken from the records of the department.

FORM OF GUARANTY IN FUTURE.

The amended regulation contemplates that guaranties given under the Food and Drugs Act on and after May 1, 1916, shall be incorporated in or attached to the bill of sale, invoice, bill of lading, or other schedule, giving the names and quantities of the articles. If the goods are properly described in the bill of sale or such other document they may be referred to in the guaranty as listed in the bill of sale or other document, without repetition of the detailed description. Guaranties may be printed or stamped on the bill of sale or other document referred to in Paragraph (e), and, in order to afford protection, must conform to paragraph (d) of the regulation. The signature to the guaranty may also be printed or stamped on the bill of sale, or on the invoice, or on the bill of lading or other schedule, describing the goods sold, if transmitted by the guarantor direct to the dealer.

The department has no authority to prescribe the exact wording which must be used in making a guaranty, nor can it determine whether any particular guaranty submitted to it is legally sufficient to protect dealers from prosecution under the Food and Drugs Act. In the opinion of the department, however, a guaranty, if worded substantially according to the following form, will comply with all the requirements of the act:

I (we), the undersigned, do hereby guarantee that the articles of food (and drugs) listed herein (or specifying the same) are not adulterated or misbranded within the meaning of the Federal Food and Drugs Act, June 30, 1906, as amended.

(Signature and address of guarantor.)

The signature of the party making the guaranty should be followed by his address.

Regulation 9 as amended describes a form for and a method of giving a guaranty, the legal sufficiency of which, under the Food and Drugs Act, is believed to be unquestionable. In the event that guarantors desire to give general guaranties to their vendees, or desire to use any form of guaranty different from that described in Regulation 9, as amended, it will be necessary for them to consider and decide for themselves whether such form is legally sufficient to protect a dealer from prosecution.

In a decision reported in Notice of Judgment No. 2471 the court held invalid a general guaranty in the following form:

The undersigned, ———, of Chicago, State of Illinois, United States of America, does hereby warrant and guarantee unto ——— that any and all articles of food and drugs, as defined by the act of Congress approved June 30, 1906, entitled "An act for preventing the manufacture, sale, or transportation of adulterated or misbranded or poisonous or deleterious foods, drugs, medicines, and liquors, and for regulating traffic therein, and for other purposes," which the undersigned has sold since October 1, 1906, or shall at any time hereafter prepare, manufacture for, sell, or deliver to said ———, will comply with all the provisions of said act of Congress, and are not and shall not be in any manner adulterated or misbranded within the meaning of said act.

It is expressly understood that this shall be a continuing guaranty until notice of revocation be given in writing and notice of acceptance of the guaranty is hereby waived.

Dated at Chicago this ———, 1906.

Signed: ———

In a later case the court sustained a prosecution based on a general guaranty in similar form.

Opinion of General Interest Regarding Questions Arising Under the Food and Drugs Acts—Quoted From Correspondence.¹

Statement of the quantity of contents on shipping cases.

DEAR SIR: If two or more packages of food, each of which bears a statement of the quantity of the contents on the outside thereof, in conformity with the Food and Drugs Act as amended March 3, 1913, and the regulations thereunder, are placed in a box, bag, barrel, crate, or similar container for convenience in shipping only, it is not required that the quantity of the contents shall be stated also on such box, bag, barrel, or other container. If, however, the quantity of the contents be stated on any such box, bag, barrel, or container, the statement should be plain and correct.

Respectfully,

C. L. ALSBERG, *Chief.*

Statements of quantity distinct from questions of branding as to character of contents.

DEAR SIR: Replying to your letter regarding the interpretation of section (b) of Food Inspection Decision No. 154, this regulation was intended to exclude from the statement of the net weight of food products in package form all linings of packages, premiums which might be inclosed in the package of food, printed circulars, and similar objects sometimes inclosed. It was not intended to exclude brine, sirup, oil, or the usual condiments which are a necessary part of canned foods; the statement of the quantity of the contents may include such substances.

The regulations, Food Inspection Decision No. 154, apply only to the marking of the quantity of the contents, and are not intended to treat of questions of misbranding as to the nature of the contents, to questions of adulteration by mixing and packing water with the product, or of substitutions of cheaper and inferior substances for the product. Violations of this character are covered by different paragraphs of the act any such box, bag, barrel, or container, the statement should be plain and correct.

Respectfully,

A. S. MITCHELL.

Secretary, Committee on Regulations, Net Weight and Volume Law.

"Dram" or "drachm" interpreted as fluid measure.

The letter quoted below is a reply to the following inquiry: We put up packages of food flavors holding 5 and 15 drachms and wish to know whether they can be labeled "Contents five drachms" and "Contents fifteen drachms," respectively.

DEAR SIR: The subject of your inquiry is covered by paragraph (d) of the regulations under the weight and volume amendment to the Food and Drugs Act (F. I. D. 154).

There appears no objection to the statement of 5 drachms, provided fluid drams are intended. Expressions of weight, however, should be in avoirdupois pounds, ounces, and fractions thereof, inasmuch as drams are units of troy weight. A statement reading "15 drams" is not in strict conformance with paragraph (d), inasmuch as 8 drams constitute 1 fluid ounce.

Please also note the exemptions for small packages given in paragraphs (j) and (k).

Respectfully,

A. S. MITCHELL.

Secretary, Committee on Regulations, Net Weight and Volume Law.

Statement of volume on packages containing more than 1 pint of liquid.

DEAR SIR: Replying to your letter asking whether a statement in fluid ounces is satisfactory where the contents of the package consists of more than 1 pint, the intention of the regulation was to require the statement in terms of the largest unit contained in the package, as "1 pint and 8 fluid ounces" or "1½ pints."

Respectfully,

A. S. MITCHELL.

Secretary, Committee on Regulations, Net Weight and Volume Law.

Marmalades.

DEAR SIR: Replying to your letter relative to standards for marmalade published in Circular 19, you are informed that the bureau is now making a study of this question, and pending further information no action will be brought against marmalade made from clean, sound, properly matured and prepared fresh fruit and sugar (sucrose), even though the proportions of fruit and sugar vary within reasonable limits from those laid down in Circular 19, namely, 45 pounds of fruit to 55 pounds of sugar. As the bureau has not yet completed its investigations on this subject, no more definite statement regarding the permitted variation can be made at this time. The product must, of course, conform in name to the fruit used.

Respectfully,

C. L. ALSBERG, *Chief.*

¹ It should be understood that the opinions expressed in these letters are offered in an advisory capacity as representing the attitude of the bureau in the light of its present knowledge and of the facts presented by the correspondents. In order to avoid the publication of unnecessary matter, those portions of the correspondence which do not bear on the subject in question have been omitted.

The term "jelly" not applicable to products made from gelatin.

DEAR SIR: In the opinion of the bureau, the term "jelly" without modification is applicable only to a product prepared according to definition 12 (Circular 19)¹, under Fruit and Fruit Products, the gelatinous consistency of which is derived entirely from the fruit. A product which is thickened by means of gelatin could not properly be labeled as fruit jelly, but should be designated in such a way as to clearly indicate the nature of the product.

Respectfully,

C. L. ALSBERG, *Chief*.

The addition of alcohol to fruit juices.

DEAR SIR: An investigation by the Department of Agriculture shows that fruit juices, such as peach and cherry juices, to which alcohol has been added, are imported or shipped in interstate commerce under the designations "peach juice," "cherry juice," etc.

It is the opinion of this department that such names as "peach juice," "cherry juice," etc., should be applied only to the unfermented juices of the corresponding fruits, containing no added sugar, alcohol, or other substances.

Fruit juices to which alcohol has been added should be plainly labeled to show this, and can not properly be designated "peach juice," "cherry juice," etc.

After September 1, 1914, goods labeled contrary to the above ruling will be denied entry, and, if found in interstate commerce, appropriate action will be taken.

Respectfully,

C. L. ALSBERG, *Chief*.

Arsenic and lead in food and food products.

DEAR SIR: For some time the Bureau of Chemistry has been investigating the presence of arsenic and lead in certain food products and has found that these metals are usually introduced into such products through the use of impure raw materials or from the apparatus or utensils employed in the process of manufacture.

The poisonous properties of arsenic and lead are well known, and this bureau holds that food containing arsenic or lead, added in any manner, is adulterated, in that it contains an added poisonous or deleterious ingredient which may render the product injurious to health. Manufacturers of all food products or ingredients of foods are, therefore, warned to be on the lookout for the presence of arsenic or lead in such products and to take such precautions as are necessary to avoid its presence in the finished product or to secure its elimination therefrom.

Respectfully,

C. L. ALSBERG, *Chief*.

The labeling of canned soaked peas.

DEAR SIR: In the opinion of the bureau the use of a vignette showing peas in the pod would not be considered proper on a label for canned soaked peas, for the reason that it might lead the purchaser to believe the product to be canned fresh peas. There would be no objection, however, to the use of a pictorial design which would not mislead purchasers as to the nature or quality of the product, such, for example, as a vignette showing a dish containing shelled peas.

Respectfully,

C. L. ALSBERG, *Chief*.

The addition of turmeric to prepared mustard.

DEAR SIR: The addition of turmeric to prepared mustard is not prohibited, provided the coloring added by means of turmeric does not conceal damage or inferiority. Such inferiority might arise from deficiency in mustard or the substitution of charcoal, starch, or other cheap filler for mustard. The presence of turmeric should in all cases be declared upon the label.

Respectfully,

C. L. ALSBERG, *Chief*.

The labeling of artificially treated waters.

DEAR SIR: If salts are added to a natural water the quantity of salts added need not be stated, but the facts regarding such treatment must appear on the label in such a manner and in type of such size as to make it clear and not misleading. Such words as "fortified," "concentrated," "added salts," etc., do not convey the proper information to the purchaser and are considered misleading and objectionable. It would be entirely satisfactory, however, to say: "Contains added sodium chlorid," "Contains added sodium bicarbonate," "Artificially treated with sodium chlorid and sodium bicarbonate," "Fortified with magnesium sulphate," or to use any truthful legend of a similar import which conveys the proper information to the consumer.

Respectfully,

C. L. ALSBERG, *Chief*.

¹ Definition 12, Circular 19: Jelly is the sound, semisolid, gelatinous product made by boiling clean, sound, properly matured and prepared fresh fruit with water, concentrating the expressed and strained juice, to which sugar (sucrose) is added, and conforms in name to the fruit used in its preparation.

Cases Referred to District Attorneys, July 6, 1914.

Article	Violation	Manufacturer	Accused dealer	Locality
Canned peas -----	Adulterated; copper sulfate -----	-----	Weinstein Co. -----	San Francisco.
Canned peas -----	Adulterated; copper sulfate -----	-----	Star Grocery, Mancebo & Alves. -----	Tulare.
Pork sausage -----	Adulterated; sulfur dioxid -----	-----	San Anselmo Meat Market, A. Bracker, Prop. -----	San Anselmo.
Tincture iodine -----	Adulterated and mislabeled; sample below standard. -----	-----	Glenn M. Nelson -----	San Francisco.
Extract lemon -----	Adulterated and mislabeled; substitution of other materials. -----	-----	Wm. Fisher Co. -----	San Francisco.
Mustard -----	Mislabeled; sample contains turmeric. -----	-----	John Zafeiris -----	Los Angeles.
Aromatic spirits ammonia -----	Adulterated and mislabeled; sample materially below standard. -----	-----	St. Rose Drug Store, Wm. McK. Stewart, Prop. -----	Santa Rosa.
Sweet spirits nitre -----	Adulterated and mislabeled; strength of sample is below professed standard. -----	-----	St. Rose Drug Store, Wm. McK. Stewart, Prop. -----	Santa Rosa.
Aromatic spirits ammonia -----	Adulterated and mislabeled; sample is materially below standard. -----	-----	A. VanSull -----	Richmond.
Sweet spirits nitre -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	A. VanSull -----	Richmond.
Sweet spirits nitre -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	Harbor Pharmacy, A. C. Lang, Prop. -----	Richmond.
Aromatic spirits ammonia -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	Richmond Pharmacy, E. M. Ferguson, Prop. -----	Richmond.
Sweet spirits nitre -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	Richmond Pharmacy, E. M. Ferguson, Prop. -----	Richmond.
Aromatic spirits ammonia -----	Adulterated and mislabeled; sample is materially below standard. -----	-----	G. M. Luttrell -----	Santa Rosa.
Sweet spirits nitre -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	F. B. LaMoine -----	Richmond.
Sweet spirits nitre -----	Adulterated and mislabeled; sample is materially below professed standard. -----	-----	Eagle Drug Co., C. C. Walker, Prop. -----	Palo Alto.
Aromatic spirits ammonia -----	Adulterated and mislabeled; sample is materially below standard. -----	-----	Eagle Drug Co., C. C. Walker, Prop. -----	Palo Alto.

Aromatic spirits ammonia	Adulterated and mislabeled; sample is materially below standard.	-----	University Pharmacy, J. F. Steinmetz, Prop.	Palo Alto.
Sweet spirits nitre	Adulterated and mislabeled; sample is materially below professed standard.	-----	Oberdeener's Pharmacy, B. Furnish & Co., Prop.	Santa Clara.
Aromatic spirits ammonia	Adulterated and mislabeled; sample is materially below standard.	-----	Oberdeener's Pharmacy, B. Furnish & Co., Prop.	Santa Clara.
Sweet spirits nitre	Adulterated and mislabeled; sample is materially below professed standard.	-----	W. A. Madden	Santa Clara.
Noodles	Adulterated and mislabeled; sample is materially below professed standard.	-----	Pacific Coast Biscuit Co.	Los Angeles.
Aromatic spirits ammonia	Adulterated and mislabeled; sample is materially below standard.	-----	McKay & Monkman	Los Angeles.
Sweet spirits nitre	Adulterated and mislabeled; sample is materially below professed standard.	-----	McKay & Monkman	Los Angeles.
Chopped meat	Adulterated; sulfur dioxide	-----	Capitol Market, H. C. Knowles, Prop.	Madera.
Chopped meat	Adulterated; sulfur dioxide	-----	Madera Meat Market, Wm. Gross, Prop.	Madera.
Jamaica ginger	Adulterated and mislabeled; substitution of other materials.	-----	Franke & Brunje	Oakland.
Mescal de tequila	Adulterated and mislabeled; substitution of other materials.	-----	Capitol Liquor Co., I. B. Reuben.	Los Angeles.
Aromatic spirits ammonia	Adulterated and mislabeled; sample is materially below standard.	-----	Chambers Drug Co.	Los Angeles.
Sweet spirits nitre	Adulterated and mislabeled; sample is materially below professed standard.	-----	Cosmopolitan Pharmacy, Geo. E. Haskell.	Los Angeles.
Creme de Menthe	Adulterated and mislabeled; non-permissible coal tar color.	-----	Edward Germain Wine Co.	Los Angeles.
Sweet spirits nitre	Adulterated; below professed standard. Mislabeled, not spirits nitre of declared strength.	-----	Brenner Brothers	San Francisco.

REPORT OF BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for May.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: May.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
May—			
Births -----	3,730	3,446	15.9
Deaths -----	3,050	3,298	13.0
Marriages -----	2,415	2,450	10.3
April—			
Births -----	3,753	3,484	16.5
Deaths -----	3,134	3,235	13.8
Marriages -----	2,575	2,446	11.3

The May total was much greater in 1914 than in 1913 for births, though the monthly death total was considerably less this year than last, the marriage total being about the same for May each year.

Moreover, the birth registration exceeded the death total for May by 680, or 22.3 per cent.

As to deaths, it may be noted that of the 3,050 decedents in May 176, or 5.8 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

Birth, Death and Marriage Totals, for Principal Counties: May.

County	May, 1914		
	Births	Deaths	Marriages
California -----	3,730	3,050	2,415
Counties of more than 25,000 population (1910):			
Alameda -----	349	290	194
Butte -----	46	37	28
Contra Costa -----	46	29	20
Fresno -----	164	87	70
Humboldt -----	50	41	15
Kern -----	51	29	30
Los Angeles -----	989	726	546
Marin -----	31	36	88
Orange -----	67	42	119
Riverside -----	44	34	42
Sacramento -----	133	102	81
San Bernardino -----	74	120	59
San Diego -----	136	101	79
San Francisco -----	614	541	481
San Joaquin -----	83	87	58
San Mateo -----	34	29	38
Santa Barbara -----	21	34	32
Santa Clara -----	147	140	93
Santa Cruz -----	40	38	20
Solano -----	42	33	20
Sonoma -----	42	48	39
Tulare -----	46	22	25
Selected groups:			
San Francisco and other bay counties -----	1,074	925	821
Los Angeles and Orange counties -----	1,056	768	665

Birth and Death Totals, for Principal Cities: May.

City	May, 1914	
	Births	Deaths
Freeholders' charter cities -----	2,293	1,845
Cities of more than 15,000 population (1910):		
Alameda -----	26	19
Berkeley -----	59	35
Fresno -----	56	33
Long Beach -----	29	39
Los Angeles -----	686	463
Oakland -----	241	181
Pasadena -----	34	35
Riverside -----	13	18
Sacramento -----	103	86
San Diego -----	95	77
San Francisco -----	614	541
San Jose -----	52	42
Stockton -----	30	40
Selected groups:		
San Francisco -----	614	541
Oakland, Alameda and Berkeley -----	326	235
Total, bay cities -----	940	776
Los Angeles -----	686	463
Neighboring cities -----	88	94
Totals -----	774	557

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Month, for California: May.

Cause of death	Deaths: May	Proportion per 1,000	
		May	April
ALL CAUSES -----	3,050	1,000.0	1,000.0
Typhoid fever -----	26	8.5	11.5
Malarial fever -----	5	1.6	1.6
Smallpox -----	1	0.3	-----
Measles -----	19	6.2	5.8
Scarlet fever -----	7	2.3	3.5
Whooping-cough -----	29	9.5	12.1
Diphtheria and croup -----	23	7.5	3.8
Influenza -----	3	1.0	6.1
Other epidemic diseases -----	15	4.9	2.2
Tuberculosis of lungs -----	370	121.3	134.0
Tuberculosis of other organs -----	95	31.2	22.0
Cancer -----	232	76.1	75.3
Other general diseases -----	132	43.3	42.1
Meningitis -----	28	9.2	6.4
Other diseases of nervous system -----	253	83.0	94.1
Diseases of circulatory system -----	541	177.4	169.4
Pneumonia and broncho-pneumonia -----	187	61.3	71.8
Other diseases of respiratory system -----	59	19.3	16.0
Diarrhea and enteritis, under 2 years -----	82	26.9	20.4
Diarrhea and enteritis, 2 years and over -----	36	11.8	9.6
Other diseases of digestive system -----	147	48.2	45.0
Bright's disease and nephritis -----	178	58.4	69.2
Childbirth -----	26	8.5	12.5
Diseases of early infancy -----	117	38.4	33.5
Suicide -----	73	23.9	24.9
Other violence -----	237	77.7	70.5
All other causes -----	129	42.3	36.7

In May there were 541 deaths, or 17.7 per cent of all, from diseases of the circulatory system and 465, or 13.3 per cent, from various forms of tuberculosis, heart diseases thus leading tuberculosis greatly.

Other notable causes of death in May were: Violence, 310; diseases of the nervous system, 281; diseases of digestive system, 265; diseases of respiratory system, 246; cancer, 232; Bright's disease and nephritis, 178; and epidemic diseases, 128.

The deaths from epidemic diseases were as follows: Whooping-cough, 29; typhoid fever, 26; diphtheria and croup, 23; measles, 19; scarlet fever, 7; malarial fever, 5; and all other epidemic diseases, 19.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Whooping-cough		Typhoid fever		Diphtheria and croup	
Alameda	6	Contra Costa	1	Alameda	4
Fresno	2	Fresno	1	Contra Costa	1
Humboldt	2	Imperial	4	Los Angeles	7
Imperial	2	Los Angeles	3	Sacramento	1
Kern	1	Orange	1	San Francisco	9
Los Angeles	2	Riverside	1	San Mateo	1
Napa	1	San Diego	2		
San Francisco	3	San Francisco	6	Total	23
San Joaquin	1	San Joaquin	1		
Santa Barbara	1	Santa Clara	3		
Santa Clara	6	Shasta	1		
Sonoma	1	Tulare	1		
Tulare	1	Yolo	1		
Total	29	Total	26		

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: May.

Geographic division	Deaths: May										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
THE STATE	3,050	128	465	232	281	541	246	265	178	310	404
Northern California	329	12	46	25	26	65	24	19	14	44	54
Coast counties	174	4	32	17	17	27	11	12	4	23	27
Interior counties	155	8	14	8	9	38	13	7	10	21	27
Central California	1,600	79	218	119	150	290	145	128	87	182	202
San Francisco	541	26	85	43	41	111	57	34	39	50	55
Other bay counties	384	22	48	24	41	76	34	28	20	45	46
Coast counties	218	12	29	15	27	47	22	16	9	17	24
Interior counties	457	19	56	37	41	56	32	50	19	70	77
Southern California	1,121	37	201	88	105	186	77	118	77	84	148
Los Angeles	726	20	141	59	61	137	55	56	51	44	102
Other counties	395	17	60	29	44	49	22	62	26	40	46
Northern and Central California	1,929	91	264	144	176	355	169	147	101	226	256
Metropolitan area	925	48	133	67	82	187	91	62	59	95	101
Rural counties	1,004	43	131	77	94	168	78	85	42	131	155

Sex, Race and Nativity.—The proportion of the sexes among the 3,050 decedents in May was: Male, 1,869, or 61.3 per cent; and female, 1,181, or 38.7 per cent.

The race distribution of decedents was: White, 2,901, or 95.1 per cent of all; Chinese, 51; Japanese, 46; negroes, 41, and Indian, 11.

The 2,901 white decedents were classified by nativity as follows: California, 790, or 27.2 per cent; other states, 1,165, or 40.2 per cent;

foreign countries, 878, or 30.3 per cent; and unknown, 68, or 2.3 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: May.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
All ages -----	3,050	1,869	1,181	100.0	100.0	100.0
Under 1 year -----	329	179	150	10.8	9.6	12.7
1 to 4 years -----	163	85	78	5.3	4.6	6.6
5 to 9 years -----	50	28	22	1.6	1.5	1.9
10 to 19 years -----	90	54	36	3.0	2.9	3.0
20 to 29 years -----	249	152	97	8.2	8.1	8.2
30 to 39 years -----	327	224	103	10.7	12.0	8.7
40 to 49 years -----	353	233	120	11.6	12.5	10.2
50 to 59 years -----	380	253	127	12.5	13.5	10.8
60 to 69 years -----	431	270	161	14.1	14.4	13.6
70 years and over -----	678	391	287	22.2	20.9	24.3

This table shows that relatively more females than males died at the age periods under 30 years as well as 70 years and over, while relatively more males than females died at the age periods from 30 to 69 years.

Length of Residence.—The table below gives the number and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: May.

Length of residence	Deaths	Per cent
Total -----	3,050	100.0
Under 1 year -----	176	5.8
1 to 9 years -----	610	20.0
10 years and over -----	1,171	38.4
Life -----	840	27.5
Unknown -----	253	8.3

It appears from this table that 5.8 per cent of all decedents had resided in California less than one year, and altogether 25.8 per cent had lived in the State under ten years. Residents of ten years' standing comprised 38.4 per cent of all decedents, and native Californians who had been here for life comprised 27.5 per cent, the length of residence being unknown for 8.3 per cent of all decedents.

MORBIDITY REPORTS.

Smallpox.

The number of cases of smallpox continues to decrease. During the month of June there were but 39 cases reported, as against 50 during the month of May, and 139 during April. Thirteen counties reported cases during June. There was no epidemic of widespread importance, however. Five cases were reported from Oakland, 6 cases from Orange County, 4 cases from San Bernardino and 4 cases from Humboldt County. Of the 39 cases, 27 had never been successfully vaccinated, 1 had been vaccinated within the seven years immediately preceding the attack, and 1 had been vaccinated more than 7 years preceding the attack. No vaccination histories were obtainable for the remaining 10 cases.

Typhoid Fever.

One hundred and twenty-seven cases of typhoid fever were reported during June, a slight increase over May, when 111 cases were reported. Most of the cases during June were reported from the larger cities of the State. San Francisco reported 18 cases, Los Angeles 16 cases, Sacramento 11 cases and Oakland 8 cases. Five cases occurred in one family in Yolo County. There was a small epidemic at Blythe in Riverside County, but there was no outbreak of importance.

Diphtheria.

One hundred and eighty-six cases of diphtheria were reported during June. This is a slight increase over May, when 174 cases were reported. One hundred and eighty-three cases were reported during April. Many carriers are discovered in all parts of the State, and until some definite method for the control of carriers can be devised and observed, it is probable that we shall continue to have about this same number of cases reported.

Scarlet Fever.

There was a slight diminution in the number of cases of scarlet fever reported during June, the number being 152, as against 199 for May.

Pneumonia.

There were 78 cases of pneumonia, a slight decrease in comparison with figures for previous months.

Poliomyelitis.

There was a slight increase in the number of cases of poliomyelitis reported, the total for the month of June being 8. Four of these were in San Francisco, 1 in San Jose, 1 in Sacramento County, 1 in Placer County and 1 in Monterey County.

Tuberculosis.

There is a slight increase in the number of cases of tuberculosis reported, the number for June being 433, and the number for May being 424. This board is making efforts to secure more complete returns in the matter of the reporting of cases of this disease. Plans are now being formulated for stimulating such reporting on the part of physicians throughout the State.

Whooping-Cough.

This disease showed a marked decrease in the number of cases during June, but 219 cases being reported during the month as against 428 for May.

Chickenpox.

The number of cases of this disease continues to decrease, there having been 234 cases reported during June, as against 331 reported during May.

Measles.

More cases of this disease were reported during the month than of any other communicable disease. Eight hundred and ninety cases were reported during June, and 1,572 cases were reported during May. It will be seen that there is, nevertheless, a considerable decrease in the number of cases.

Epidemic Cerebrospinal Meningitis.

Three cases of this disease were reported during June, 2 of these occurring in Los Angeles, and 1 in San Francisco.

Trachoma.

Eight cases of trachoma were reported, all of them occurring in Los Angeles.

Tetanus.

One case of this disease was reported from San Francisco.

Mumps.

Forty cases of mumps were reported. There were 79 cases reported during May.

Gonococcus Infection.

Twenty-two cases were reported during June, 35 having been reported in May, and 51 having been reported during June.

Syphilis.

Twenty-four cases of syphilis were reported during June. Most of these were brought to light through Wasserman reactions performed at the State Hygienic Laboratory. This laboratory continues to perform these reactions, free of charge, to all citizens living in cities of less than 20,000 inhabitants, who are unable to pay for same, upon proper recommendations of physician and health officer.

Leprosy.

One case of this disease was reported from San Bernardino County.

Pellagra.

One case of this disease was reported in Los Angeles.

Smallpox.

Distribution of Cases Reported During June, 1914.

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vac- cinated more than seven years preceding attack	Number never suc- cessfully vaccinated	Vaccination history not ob- tained or uncertain
Alameda County -----						
Oakland -----	5				5	
Humboldt County -----	4					4
Los Angeles County -----						
Los Angeles -----	2				2	
Venice -----	1					1
Madera County -----	1				1	
Nevada County -----						
Grass Valley -----	2					2
Orange County -----	6				6	
Orange -----	1				1	
San Bernardino County -----						
San Bernardino -----	4		1		3	
San Francisco -----	3				2	1
San Joaquin County -----	1					1
San Mateo County -----	1				1	
Redwood City -----	1					1
Santa Cruz County -----						
Santa Cruz -----	2				2	
Sonoma County -----						
Santa Rosa -----	3				3	
Stanislaus County -----	1				1	
Turlock -----	1			1		
Totals -----	39		1	1	27	10

Typhoid Fever.

Distribution of Cases Reported During June, 1914.

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----		Sacramento County -----	
Alameda -----	3	Sacramento -----	11
Berkeley -----	3	San Bernardino County -----	1
Oakland -----	8	Ontario -----	1
Calaveras County -----		San Bernardino -----	3
Angels Camp -----	2	San Diego County -----	
Colusa County -----	3	Chula Vista -----	1
Contra Costa County -----		Coronado -----	1
Richmond -----	2	San Diego -----	1
Imperial County -----	3	San Francisco -----	18
Kern County -----		Santa Clara County -----	2
McKittrick -----	2	Los Gatos -----	2
Maricopa -----	1	San Jose -----	1
Lassen County -----	1	Solano County -----	4
Susanville -----	1	Rio Vista -----	1
Los Angeles County -----	2	Vacaville -----	1
Los Angeles -----	16	Stanislaus County -----	
Sierra Madre -----	1	Oakdale -----	1
Merced County -----		Tehama County -----	
Los Banos -----	1	Corning -----	2
Monterey County -----	4	Red Bluff -----	3
Nevada County -----	3	Yolo County -----	5
Orange County -----		Yuba County -----	
Huntington Beach -----	3	Marysville -----	1
Santa Ana -----	2		
Riverside County -----	6	Total -----	127

Poliomyelitis (Infantile Paralysis).
Distribution of Cases Reported During June, 1914.

Counties and cities	Number of new cases reported
Monterey County -----	
Salinas -----	1
Placer County -----	1
Sacramento County -----	1
San Francisco -----	4
Santa Clara County -----	
San Jose -----	1
Total -----	8

Epidemic Cerebrospinal Meningitis.
Distribution of Cases Reported During June, 1914.

Counties and cities	Number of new cases reported
Los Angeles County -----	
Los Angeles -----	2
San Francisco -----	1
Total -----	3

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.
Reported During June, 1914.

Disease	Total number of new cases reported during the month in the entire State
Scarlet fever -----	152
Measles -----	890
Diphtheria -----	186
Dysentery -----	3
Chickenpox -----	234
Erysipelas -----	20
German measles -----	5
Gonococcus infection -----	22
Leprosy -----	1
Malaria -----	11
Pneumonia -----	78
Syphilis -----	24
Tetanus -----	1
Trachoma -----	8
Tuberculosis -----	433
Whooping-cough -----	219

AUGUST BULLETIN.

REGULATIONS OF THE CALIFORNIA STATE BOARD OF HEALTH FOR THE PREVENTION AND CONTROL OF DIPHTHERIA.

Rule 1. Notification.

Any person in attendance on a case of diphtheria, or a case suspected of being diphtheria, shall report the case immediately to the local health authority, who shall in turn report at least weekly, on the prescribed form, to the Secretary of the State Board of Health all cases so reported to him.

NOTE.—In the absence of local rules permitting notification by telephone, the report to the local health authority shall be in writing.

Rule 2. Diagnosis.

The local health authority shall require the submission of swabs or cultures from the nose and throat of every case of diphtheria, or case suspected of being diphtheria, for the purpose of examination at a state or municipal laboratory. It shall be the duty of every physician attending a case of diphtheria, or a case suspected of being diphtheria, to take swabs or cultures when required to do so by the local health authority.

NOTE 1.—Examination of swabs or cultures for diphtheria will be made without charge at the State Hygienic Laboratory for all communities excepting those cities having a population over 20,000. It is expected that these larger cities will provide adequate free laboratory facilities. (See Directions for Sending Material to the State Hygienic Laboratory.)

NOTE 2.—There are a number of diseases which may be mistaken for diphtheria owing to the formation of a membrane in the throat, for example Vincent's angina, which is responsible for many discrepancies between the clinical diagnosis and the laboratory findings. On the other hand, many cases of diphtheria are unrecognized because of the absence of the typical membrane. In these cases the membrane may be present in the nose or larynx, or the inflammation in the throat may not result in the formation of a distinct membrane. In view of these facts, the State Board of Health requires that the diagnosis of diphtheria, whenever possible, be based upon laboratory examination.

Rule 3. Precautions to be Observed by the Physician.

The physician, having charge of a case of diphtheria, or a case suspected of being diphtheria, shall take such precautions as may be necessary to avoid the contamination of his hands and clothing.

NOTE.—Whenever it is necessary to come into close contact with the patient, the physician should wear a washable outer garment, which should not be removed from the room until disinfected, and should also wash his hands immediately after leaving the room.

Rule 4. Instructions to Household.

It shall be the duty of the physician in attendance on a person having diphtheria, or suspected of having diphtheria, to instruct the members of the household in precautionary measures for preventing the spread of diphtheria.

NOTE.—The following instructions are required by Rule 4:

(1) If the patient is not removed at once to a hospital, he shall have a separate bed in a room screened against flies.

(2) All persons, except those having the necessary care of the patient, shall be excluded from the sickroom.

(3) Animals shall be excluded from the sick room.

(4) The persons caring for the patient shall avoid coming in contact with any other persons within the household or elsewhere.

(5) The person having the care of the patient shall wear a washable outer garment and shall thoroughly wash the hands with soap and water after handling the patient or any object which he may have contaminated. On leaving the room in which the patient is isolated, the attendant shall take off the washable outer garment and leave it in the room until disinfected.

(6) All discharges from the nose and mouth shall be burned or disinfected. It is recommended that these discharges be received on pieces of gauze or other soft cloth and be dropped in a paper bag which is conveniently placed. The bag and its contents can easily be burned.

(7) Objects which may have been contaminated by the patient shall be disinfected before being removed to any place where they may become possible sources of infection.

a. Clothing and bedding, including the washable outer garment of the attendant, shall be boiled in water or soaked for one hour in five per cent phenol solution, or ten per cent formalin solution before being sent to the laundry.

b. Dishes and other utensils should be boiled in water or soaked for one hour in five per cent solution of phenol or ten per cent solution of formalin.

c. Remnants of food should be burned, or, if liquid, disinfected by boiling, or adding an equal volume of five per cent solution of phenol or a ten per cent solution of formalin and allowing to stand for one hour.

Rule 5. Investigation of Case.

Upon being notified of a case of diphtheria, or a case suspected of being diphtheria, the local health authority shall make an investigation which shall include an inquiry regarding the probable source of the infection. If this source of infection is outside his jurisdiction, he shall notify the State Board of Health, in order that it may inform the health authority (local or state) within whose jurisdiction the infection was probably contracted. The local health authority should determine that the instructions specified in Rule 4 are understood and observed, and in the event of their non-observance, shall take proper legal steps for their enforcement.

NOTE.—In conducting the investigation prescribed in Rule 5, it is advised that the data be recorded which are indicated in the Diphtheria Investigation Form described in the Directions for Conducting an Epidemiological Investigation of Diphtheria. (For procedure regarding contacts and carriers, see Rules 8 and 11.)

Rule 6. Isolation.

If the local health authority, upon making the investigation prescribed in Rule 5, is satisfied that the case is one of diphtheria, or is strongly suggestive of diphtheria, he shall define the limits of the area in which the patient and his immediate attendants are to be officially isolated. A warning notice shall be affixed to all entrances to this area.

NOTE 1.—The warning notice specified in Rule 6 shall be as follows:

DIPHTHERIA.

All persons are warned not to enter this room unless directly concerned in the care of the patient.

NOTE 2.—Persons in attendance on the patient must remain in the prescribed area of isolation; provided, however, that persons taking the precautions specified in Rule 4 (Note) may leave the prescribed area.

Rule 7. Quarantine.

If the local health authority, upon making the investigation prescribed in Rule 5, is satisfied that the case is one of diphtheria, or is strongly suggestive of diphtheria, he shall establish a quarantine by affixing a placard in a conspicuous place at the principal entrance to the premises. Until removal of the placard is authorized by the local health authority, no persons shall enter or leave the premises or

remove any article therefrom without the permission of the local health authority.

NOTE 1.—The placard specified in Rule 7 shall be in the following form, in which the name of the disease shall be in letters not less than two and one half inches in height:

DIPHTHERIA

These premises are declared to be in a state of quarantine. All persons are forbidden to enter or leave these premises or to remove any articles therefrom without the permission of the local health authority.

Date-----

Local Health Authority.

NOTE 2.—Until such time as a positive diagnosis is made in cases strongly suggestive of diphtheria, the word "Suspected" may precede the word "Diphtheria" on the placard specified in Rule 7.

NOTE 3.—Under certain circumstances, it will be impractical for the local health authority to define an area of isolation within the quarantined premises. Under such circumstances the areas of quarantine and isolation will be coincident, and all rules regarding quarantine and isolation will hold throughout the quarantined premises, except that the warning notice for the area of isolation will not be posted in addition to the quarantine placard.

NOTE 4.—The quarantined premises will ordinarily be a dwelling house with its surrounding yard. Under certain circumstances it is not necessary to quarantine an entire building, as the part in which diphtheria is present may have a separate front and rear entrance and may be so constructed that persons can not enter directly from another part of the building. If the local health authority, upon investigation, finds that the conditions are such that the health of the community would be sufficiently safeguarded, he may limit the quarantine to that part of a building which is the separate abode of an entire household, as, for example, a flat or a suite of rooms in a hotel. When removal to a hospital is impossible and isolation can be rigidly enforced, quarantine may be limited to a single room in a hotel or lodging house. When a portion of a dwelling is quarantined, the placard must be conspicuously placed at the principal entrance of the part quarantined.

Rule 8. Contacts.

When isolation and quarantine for diphtheria have been established in accordance with Rules 6 and 7, any person living within the quarantined premises, but staying at all times outside the area of isolation, may be given permission by the local health authority to go to and from the premises, if the following conditions have been met: Cultures taken from his nose and throat and submitted to a state or municipal laboratory must have been reported as negative for diphtheria. All other members of his household must, if possible, have had cultures taken from their noses and throats and those persons whose cultures were found positive must be isolated so that there is no contact with him. He must also agree to avoid any occupation or practice which would make him especially dangerous in the event of his becoming a carrier. The local health authority may revoke this permission if the above provisions are not complied with.

In his investigation of a case of diphtheria, the local health authority shall make inquiry regarding those who have come in contact with the patient, and, if any of them contemplate leaving the jurisdiction of the local health authority within two weeks after the last exposure, the local health authority shall notify the State Board of Health of their names and destinations.

NOTE 1.—Rule 8 permits the wage-earner to continue his occupation unless he has already become a carrier or unless his occupation is such that he would probably infect others if he became a carrier. Such occupations are the production or handling of milk and any work which involves contact with large numbers of persons, especially young children.

NOTE 2.—Children will ordinarily not be released under the provisions of Rule 8, especially when the quarantined premises contain a yard in which they can get exercise and fresh air. When the local health authority finds that crowding is favoring the transference of infection to the uninfected children of the household, he may permit them to leave the premises under the conditions specified in Rule 8. They should not be permitted to attend school or come in contact with other children during the period of quarantine.

NOTE 3.—If contacts who have been released under the provisions of Rule 8 will leave the quarantined premises and will not reenter them until the quarantine has been terminated, the local health authority may permit such contacts to attend school or engage in other occupations from which they would otherwise be excluded.

NOTE 4.—The purpose of the establishment of an area of enforced isolation within the quarantined premises is not only to prevent acute cases among the contacts, but especially to diminish the formation of carriers. Under the previous system of enforced quarantine with optional isolation, the formation of carriers frequently occurred. Carriers are much more dangerous to the community, in the aggregate, than the acute cases.

NOTE 5.—Although diphtheria antitoxin is efficient in preventing contacts from contracting diphtheria, it will not prevent their becoming carriers. Therefore no relaxation of the precautions against contact with infectious persons can be permitted to those who have been immunized. Persons immune owing to previous attacks of the disease also may become carriers and must observe the precautions.

NOTE 6.—For the procedure when contacts are found to be carriers, see Rule 11.

Rule 9. Release from Quarantine.

As soon as a diphtheria patient is free from all symptoms, the attending physician shall notify the local health authority of that fact. The local health authority or his representative shall thereupon make an investigation and, if he finds that the case has made a complete clinical recovery, as reported, he shall take cultures from the nose and throat of the convalescent at intervals of not more than a week and not less than forty-eight hours and shall submit them to a state or municipal laboratory. Where it is impractical for a local health authority, or his deputy, to take the cultures he may permit the attending physician to represent him for that purpose. As soon as two successive negative cultures from both nose and throat have been obtained, the local health authority shall terminate the quarantine and the isolation. If two successive negative cultures can not be obtained from the convalescent within one month after recovery, he is to be regarded as a carrier and the quarantine is to be terminated, leaving the isolation in force until removed according to Rule 10. If the area of isolation and the quarantined premises coincide, the warning card for isolation is to be substituted for the placard for quarantine.

NOTE 1.—It is advised that cultures be taken from all contacts before quarantine is raised, so that carriers may be detected and the community may be protected through the enforcement of the provisions of Rule 11.

NOTE 2.—See Rule 10, Note 1, regarding the disinfection of the area of isolation.

Rule 10. Release from Isolation.

At the end of four weeks after complete recovery from diphtheria, as determined by the local health authority in accordance with the provisions of Rule 9, if positive cultures are still being obtained, the local health authority shall at once report to the State Board of Health the circumstances of the case and shall recommend either a continuation of isolation or release from isolation under certain specified restrictions. Isolation is not to be continued for more than six weeks after complete recovery except when specified by the State Board of Health. When

isolation is terminated the objects in the area of isolation must be disinfected.

NOTE 1.—Disinfection of the objects in the area of isolation is of much less importance than the discovery and control of carriers and missed cases. The dangerous objects are those which have been recently moistened by the mouth or nose of an infectious person, for example, pocket handkerchiefs, eating utensils, and things which have been coughed or sneezed upon. Where the precautions given in Rule 4 have been observed and isolation has not been terminated until two successive negative cultures have been obtained from the patient, there is little danger of infection from the room itself and the disinfection may consist of a thorough cleaning and airing of the room. On the other hand, if an acute case has been terminated by death or has been removed to another place, there may be considerable numbers of moist bacilli on objects in the room, and then fumigation followed by scrubbing and airing is advocated. In every instance the local health authority shall determine the minimum amount of disinfection required, and shall see that it is carried out. (See Directions for Disinfection.)

Rule 11. Diphtheria Carriers.

Any person who has been free from symptoms of diphtheria for a month or longer and who harbors diphtheria bacilli is a carrier. Any known or suspected diphtheria carrier shall be reported to the local health authority, who shall investigate and report to the State Board of Health. Pending the receipt of instructions from the State Board of Health, the local health authority shall isolate or quarantine the carrier if in his judgment the danger to the community necessitates such action. In the event of any known or suspected carrier leaving the jurisdiction of a local health authority, the State Board of Health shall be notified by the local health authority of the name of the carrier and his destination.

NOTE 1.—On receipt of the report required by Rule 11, or after further investigation in the field or in the laboratory, the State Board of Health will make such individual rulings as may seem necessary to minimize the danger to the community from the carrier.

NOTE 2.—In most instances it will only be necessary to instruct diphtheria carriers regarding avoidance of those occupations, habits, and contacts which would facilitate the transfer of infection. Carriers who are found to be especially dangerous may need further restriction. The ultimate decision will be made by the State Board of Health.

NOTE 3.—Local health authorities should take cultures from the noses and throats of carriers at frequent intervals, so that it will be known when the persons cease to be dangerous.

NOTE 4.—Ordinarily in the absence of an epidemic of diphtheria, about three per cent of the persons in the community are diphtheria carriers. In the presence of an epidemic, the number may rise to 18 per cent or higher, and these carriers are responsible for the continuation of the epidemic. Of similar importance are the large number of missed cases, who do not show the typical lesions of diphtheria, but have inflammation of the nose or throat, due to the diphtheria bacillus. Such cases are only recognized by cultural tests, and, when diphtheria is prevalent, cultures should be taken from all sore throats and from all contacts, so as to interrupt the epidemic by detecting and controlling the greatest possible number of carriers and missed cases.

NOTE 5.—Cultures from a carrier may be intermittently positive, and therefore he may not be discovered through a single laboratory test. For this reason the results of thorough field investigations are important. Field investigations, moreover, may bring evidence that a carrier is actually infecting other persons, and is, therefore, especially dangerous. (See Directions for Conducting an Epidemiological Investigation of Diphtheria.)

NOTE 6.—While diphtheria antitoxin is invaluable in the treatment of diphtheria, it is not of value in clearing up diphtheria carriers.

NOTE 7.—By requiring the reporting of the removal of contacts and carriers from the jurisdiction of one local health authority to that of another, as required by Rules 8 and 11, the State Board of Health intends to secure information to be transmitted to local health authorities for their use in preventing the spread of diphtheria. Upon receipt of information from the State Board of Health that contacts or carriers have moved into his jurisdiction, the local health authority should proceed as if they had been originally under his jurisdiction.

Rule 12. Epidemiological Investigation.

Whenever a local health authority receives reports of the existence of diphtheria within his jurisdiction, or is notified by the State Board of Health that cases of diphtheria reported from other communities have probably received the infection within his jurisdiction, he shall conduct an investigation to ascertain the sources of infection, and shall report the results to the State Board of Health. He shall immediately take such action for the protection of the community as may be indicated by the conditions discovered or suspected in the course of his investigation. .

NOTE 1.—*Diphtheria in Schools and Institutions.* If diphtheria appears in a school or public institution, and there is reason to suspect that the disease was contracted within the institution, cultures from the noses and throats of all the officers, teachers, pupils and inmates of the institution, or main division of the institution, shall be taken, in order that the epidemic may be promptly checked by isolation or exclusion of the carriers.

When diphtheria is present in a community, teachers must send home any children who come to school showing symptoms suggestive of infectious disease, and must report at once to the local health authority, so that he can make an investigation and determine whether it is safe for the child to return to school. During an outbreak of diphtheria, teachers shall also report to the local health authority the return to school of any pupil after an unknown illness, so that it may be determined whether he is a diphtheria carrier.

It is illogical to fumigate school rooms, auditoriums, and dining halls, after diphtheria. In such rooms, all objects with which persons come in contact should be disinfected by mechanical cleansing with soap and water.

NOTE 2.—*Milk Supply.* If it is known or suspected that the infection is derived from a milk supply, the local health authority shall forbid the delivery or use of the milk until such time as it is determined that the supply is safe.

NOTE 3.—*Library and School Books.* Libraries and schools shall not issue books to be taken to homes where diphtheria exists. If books have been used by a diphtheria patient or carrier, they should be destroyed or kept out of circulation and use for one year. If library or school books have been in the household in which there is a diphtheria patient or carrier, and have not been within the area of isolation, and have not been used or handled by the patient or carrier, they may be returned to the library or school. The ordinary methods of disinfection of books are inefficient.

GENERAL DIRECTIONS.**Directions for Sending Material to the State Hygienic Laboratory for Examination for Diphtheria.**

Physicians and local health authorities in communities having a population under 20,000 may obtain from the State Hygienic Laboratory, or any of its depositories, outfits for taking and mailing swabs for cultural tests for diphtheria. The following directions and data card accompany the outfit:

CALIFORNIA STATE BOARD OF HEALTH,
STATE HYGIENIC LABORATORY, BERKELEY.

Diphtheria Diagnosis.**Directions for Taking Culture.**

An antiseptic should not be used within two hours prior to taking the specimen, as it may interfere with the subsequent development of the culture.

Place the patient in a good light and, if a child, hold properly.

Depress the tongue so as to get a clear view of the throat.

With one of the swabs rub the suspicious places firmly, twisting it around while in contact with a patch of visible exudate. If there is no exudate, rub the swab freely against the tonsils and pharynx.

Remove the swab from the throat without touching other parts of the mouth, if possible. Without laying down the swab or touching anything with it, replace it in its glass tube and insert the cotton plug.

Immediately mark the label on the tube with the patient's initials and the source of the culture, *e. g.*, "throat."

Cultures will be planted from the swabs as soon as they arrive in the laboratory.

Report by----- {telephone (collect)
telegraph (collect)
mail } to-----

Date_____ Signature of Inspector.

As fast as the epidemiological investigation records are obtained, they should be tabulated and studied. Special attention should be given to possible sources of infection which are common to several cases. Every effort should be made to discover missed cases and carriers, as they are largely responsible for the continuation of an epidemic. Only slight advantage is gained by fumigation and disinfection, while much can be expected from isolation of missed cases, convalescents, and carriers.

Directions for Disinfection.

Disinfection, while of much less importance than the control of persons who harbor diphtheria bacilli, nevertheless should be performed whenever a case is released from isolation. This disinfection should be a thorough cleaning of the entire area of isolation. This cleaning should consist in the scrubbing with soap and water of all woodwork and furniture which can be reached by persons in the room. There is no necessity for washing ceilings or the upper parts of high walls, but they should be mopped. As far as possible, a sick room should not contain upholstered furniture, carpets, and hangings. If such objects are present in the room, they should either be fumigated or exposed to the effects of sunshine and drying for several days. When the conditions in the room indicate marked contamination with fresh, infectious material, as when a case has just died, or has been removed from a room in which the proper precautions were not observed, fumigation may be found necessary as a protection to those who will carry out the proper cleansing of the rooms.

If a room is fumigated for diphtheria, formaldehyde gas in the presence of water vapor should be used. Fumigation by sulphur is less efficient and is injurious to fabrics and metals. A convenient and inexpensive method of fumigating with formaldehyde is as follows: Prepare the room by closing all cracks and crevices by plugging or by pasting paper over them. Open bureau drawers and closets, and spread fabrics so that the formaldehyde will have access to all surfaces. Cover a space in the center of the floor with newspapers to prevent damage from splashing. Place a clean, ten-quart galvanized iron pail on the floor and put into it eight ounces of dry potassium permanganate crystals. Pour one pint of formalin into the pail, retire quickly, and seal the door. One container and the quantities of chemicals stated are sufficient for fumigation of 1,000 cubic feet of air space. The heat generated by the chemical action between the potassium permanganate and the formaldehyde will evaporate the solution, throwing formaldehyde and water vapor into the room. Risk of fire from too rapid oxidation may be avoided by the use of clean pails. After twelve hours the room should be opened and aired, and, if the remaining formaldehyde gas is oppressive, a little ammonia should be sprayed in the air. The room should then be thoroughly cleaned.

REPORT OF THE BUREAU OF ADMINISTRATION FOR
JULY, 1914.

JOHN F. LEINEN, Director.

The State Hygienic Laboratory has made bacteriological examinations of water samples, submitted by the following parties. Reports of the results of these examinations are on file in this office:

Western Pacific Railroad Company's Supply at Sacramento; Richmond's municipal supply; Yosemite Valley Railroad Company's supply at Merced; town supply of Jackson; town supply of St. Helena; town supply of Maxwell; town supply of Merced Falls; city supply of Chico; town supply of Dorris; supply of the Crocker-Huffman Land and Water Company at Merced.

The Civil Service Commission certified to the Board the names of Milton P. Duffy and Clyde J. Stuart for the position of Pure Food and Drug Inspector. Both these men have been appointed as Inspector. Mr. Duffy vice Charles W. Pool, temporary appointment expired, and Mr. Stuart as a general inspector of foodstuffs sold throughout the State.

The Civil Service Commission granted an authorization for the temporary employment of a stenographer by Miss Jammé while in Los Angeles.

Following several complaints received by this office relative to the general meat supply of San Francisco and Bay Cities, Professor Jaffa was instructed to detail some of his inspectors for an investigation of this matter. Inspectors Robbins and Alexander were detailed, the inspections made, and reports filed with this Board.

Complaint was made to this office regarding the food served by the Pacific Gas and Electric Company to its employees at Camp Britton, Placer County. This complaint was referred to the company, and it subsequently reported that its engineer of operation and maintenance had been detailed to investigate the charges made.

The Riverside Portland Cement Company applied to the Board for information relative to jurisdiction of the State Bureau of Labor Statistics over sanitation of labor camps, and requested information relative to the installation of a sewage disposal system. The State Board of Health jurisdiction over camp sanitation was explained to this company, and it was instructed to take up the matter of sewage disposal with the County Health Officer.

The President of the State Commission of Immigration and Housing submitted to the Secretary of this Board a new pamphlet issued by the Commission, and requested that the Secretary criticise the same.

A report on the hop yards of Sonoma County was received from Dr. S. S. Bogle, County Health Officer. A copy of this report was forwarded to the State Commission of Immigration and Housing.

The report relative to the cuspidors on the Key Route ferryboats was transmitted to the company. The general manager has informed the Board that this matter has been taken up and has forwarded a copy of the instructions of the general superintendent relative to the correction of the insanitary conditions reported.

The St. Helena Sanitarium reports that it has submitted, to the county engineer, plans for the installation of a septic tank to take care of the effluent from the institution. It also reports that the irrigation of the vegetable garden has been attended to in conformity with the instructions of the Board's Sanitary Inspector.

The District Attorney for Tulare County telephoned to this office July 20th, stating that a leper had been discovered in the city of Visalia, asking what disposition might be made of the patient. He was informed that the law requires the county to care for its lepers, there being no provision for state care. Investigation revealed the fact that the patient in question had escaped from the Los Angeles County Hospital, and the matter of the proper confinement of lepers in this institution has again been taken up with the Los Angeles County supervisors. The Board's attorney has rendered an opinion in the matter of compelling county authorities to keep lepers in restraint, in which he states that such authorities are personally liable for any damage resulting from the escape of such lepers.

Twelve cases of typhoid fever occurred during July in a family at Chico, the entire family being stricken. At the request of the County Health Officer samples of water from a well, suspected of being the source of infection, were sent to the State Hygienic Laboratory for examination. Two cases proved fatal.

The Health Officer for the city of Monrovia asked this Board for an opinion concerning the ordinance recently adopted by that city, by which the office of health officer is created without creating a board of health. The Board's attorney advised that the ordinance is in direct conflict with section 3061 of the Political Code, and the Monrovia authorities were so informed.

Four cases of poliomyelitis were reported from Hanford early in July. Two of them were fatal, but an examination of the cord and brain of one of these cases failed to confirm the diagnosis. Clinical symptoms were pronounced, however.

J. C. Thomas of Fortuna informed this Board, July 23d, that he had contracted smallpox by weaving a rag rug, the rags having come from Ferndale, where he asserted there have been many unreported cases of smallpox. The charges against the health officer, Dr. J. A. Lane, were of a serious nature and that official was asked to explain.

A case of smallpox was reported July 27th by the Berkeley acting city health officer, the patient being a teamster employed upon the University of California campus. Because the university was closed, and because the case was not within any school district of the city, the exclusion provisions of the vaccination act were not enforced.

REPORT OF THE BUREAU OF TUBERCULOSIS FOR JULY, 1914.

BURT F. HOWARD, M.D., Director.

July 1st to 10th was spent by the Director in completing the investigations of Eastern methods of dealing with tuberculosis, referred to in the June report, and in returning from this trip.

While this is not the place for a detailed description of these methods, it is desired to call attention to certain important factors. First in importance I would place the so called "dispensary system," which is primarily an educational and sociological agency, without which it would be difficult, if not impossible, to maintain an efficient system of hospitals and sanatoria. The dispensary finds the case of tuberculosis, and at once, by educational methods, reduces the danger of infection of the family and community, assigns the patient to the proper hospital, receives him on discharge from said hospital and continues in its medical supervision of the individual and his family.

The "dispensary nurse" is a sociological worker as well as a nurse, and is a most necessary adjunct to this work, acting as "a feeder" for the dispensary, which bears a similar relation to the hospital. Where there are no hospitals available, the dispensary physician and nurse combat the disease through all practicable methods, including those of the "tuberculosis class."

There are 116 dispensaries in operation in Pennsylvania, served by 115 full time nurses and 222 physicians who devote to the work as many hours each week as the occasion demands. There are also three state hospitals for tuberculosis, accommodating about 2,000 patients.

Next to the dispensary in importance I would place the local tuberculosis hospital or tuberculosis work of the general hospital. This hospital is primarily for toxic cases and for those awaiting admission to sanatoria, thus protecting the home and at the same time saving the patient from the necessity of travel, at a time when he can least afford to do so. If developed in connection with general hospitals it tends to do away with discrimination against tuberculous persons and has a great educational value.

The local tuberculosis hospital idea is well developed in Massachusetts, which has 15 such hospitals, with 6 others about to be built. The State subsidizes approved local hospitals by paying \$5.00 a week for each patient with tubercle-bacilli in the sputum.

California would probably find this plan or a similar one more practicable than that of large state hospitals or sanatoria.

The state hospital for tuberculosis is able to offer facilities for treatment and social life which many local hospitals cannot afford, and so plays an important part in any complete plan for treating tuberculosis. Ideally it is reserved for early cases, or has a department so reserved, as at Mount Alto, Pennsylvania, where the two departments "Hospital" and "Sanatorium" are about one half mile apart.

Reports were submitted this month to the State Board of Health upon the dispensary of the San Francisco Association for the Study

and Prevention of Tuberculosis at 1547 Jackson street, San Francisco, and the conference of the State and Territorial Health Authorities with the Public Health Service, the conference of State and Provincial Boards of Health of North America, the conference with the Commissioner of Indian Affairs, and the meeting of the American Medical Association.

It was decided to distribute cards for reporting cases of tuberculosis, as far as possible, to each physician in the State, and 2,113 circular letters were prepared for distribution to physicians and health officers.

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR JULY, 1914.

ANNA C. JAMMÉ, Director.

In the educational system of the State the training schools for nurses may be said to fill a very definite and necessary place, and are attached to a hospital affording a general experience. The greater number of the schools are of necessity grouped in and around the larger cities, while a considerable number are scattered throughout the State in the smaller towns and rural communities. The total number of schools of nursing in this State is eighty-three (83). The number of students in each of these school ranges from four (4) to one hundred and ten (110). The opportunity for experience affords about as wide a range, from a hospital of ten (10) beds to one of nine hundred (900) beds, and from a hospital caring for a few medical and surgical patients to one having under its care patients suffering from many classes of disease, mental and physical.

Coming to these schools from the public schools of the State are young women to be prepared for the service of the public, not only in the care of the sick, but in the many ways in which the public is demanding the services of a nurse. As, for instance, in the great field of public health work; welfare work in shops and factories; school nursing; social service; the home; the hospital and on through a limitless field, which demands women of ability and technical training.

From the simple sick-room helper, the nurse has developed until she is needed, not only by physicians and surgeons as a co-worker and as assistant at the bedside, but she is needed by the sanitary expert and as an expert teacher in the community. Therefore, it may be justly said that schools of nursing occupy a definite place in the educational work among the young women of the State.

The relation of the high school in its vocational work, in the preparation of the young student for the more advanced study in the training school and later, if so desired, her special course in the normal school in preparation for her work as a teacher of nurses, affords interesting possibilities for the student and for the hospital.

This will make possible the preparatory course for the student taking her training in the small and isolated hospital, where it is not possible to maintain for a small group of students, the faculty or teaching equipment that is available in a large city.

The idea of the connection of the training school with existing educational centers is not new. This may be found to-day in fourteen State technical schools and universities in the United States. In one instance the training school is a part of the university system, and in this State we find elementary nursing and its allied studies being taught in seven high schools.

The fact that the demand for nurses for public health service in its many branches, not only in the cities but likewise in the rural communities, makes the problem of the preparation of the nurse one of public consideration.

Many of the hospitals in the rural communities are not only greatly needed, but may provide an excellent field for teaching, which can be strengthened by affiliation, for a few months, with a larger institution affording wider experience.

The importance of the practical training and the value of the experience which the hospital affords to the student of nursing can in no way be minimized. The daily and nightly routine among the sick under the instruction and guidance of an expert teacher, a nurse who works carefully, critically and sympathetically, inspiring her pupils with the spirit of their vocation and with the true estimate of their work, forms a system of education that is of growing value to the state.

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR JULY, 1914.

WILBUR A. SAWYER, M.D., Director.

Drinking Water and Typhoid Fever.

At this time of year, owing to the prevalence of typhoid fever, many samples of drinking water are sent to the laboratory for examination. A considerable number of these samples are not suitable for bacteriological tests owing to the way in which they are taken and sent. If an examination of a drinking water supply suspected of sewage pollution is desired, the following procedure should be followed:

The health officer should be informed of the reasons for suspecting the water and thinking that there is danger to the health of the persons drinking it. If the local health officer agrees as to the danger, he should give adequate warning that the water should not be drunk except after it has been boiled. A description of the source of the water, together with the reason for believing it to be polluted, should be sent to the State Hygienic Laboratory at Berkeley together with the health officer's request for a bacteriological examination. The laboratory will then send an ice-box and sterile container and directions for taking and sending the sample. Samples taken in other containers and not packed in ice will not be examined. No charge is made for any work done in the State Hygienic Laboratory, but the sender of samples for examination is required to pay all express charges.

Water is not examined directly for typhoid bacilli, because such an examination is not practical. The examination as made always includes a quantitative test for colon bacilli. These bacteria are present in the intestinal contents of people and animals, and they are the best index we have of the presence of sewage pollution in water and of the consequent danger from typhoid fever and other water-borne diseases. If colon bacilli can be demonstrated in amounts of the water as small as one cubic centimeter, the water should not be regarded as safe for drinking purposes, and if the organisms can be isolated from ten cubic centimeters of the water, it should be regarded as under suspicion. In the latter case, investigation should be made to find whether the intestinal bacteria come from human or animal sources. Pollution with material from the human intestines is much more dangerous to man than that from animals.

When sewage pollution has been demonstrated, a safe water supply should be secured as soon as possible, and in the mean time all drinking water should be boiled or submitted to the hypochlorite treatment checked by bacteriological tests. It is a serious responsibility for officials who have been notified that the common supply of drinking water shows colon bacilli and is not safe to fail to warn the public of the situation and to take steps for a safe public supply. Sooner or later, typhoid patients or typhoid carriers add their excreta to the sewage causing the contamination, and then a typhoid epidemic

suddenly appears among the people drinking the polluted water. The public should insist on having a pure water supply. Many people in California are annually losing their lives or undergoing weeks of unnecessary suffering and expense owing to the false economy of their communities in furnishing drinking water known to be polluted.

Division of Biological Examinations.

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of July, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----	1	2		3
Diphtheria -----	10	16	1	27
Gonococcus infection -----	2	6		8
Hookworm -----		1		1
Malaria -----	1	4	1	5
Rabies -----	2	15	1	18
Syphilis (Wasserman test)-----	15	55	14	84
Tuberculosis -----	7	22		29
Typhoid (Widal test)-----	11	15		26
Typhoid (blood culture)-----		1		1
Water pollution -----	15	20	2	37
Miscellaneous -----	5	9	3	17
				256
Northern Branch at Sacramento:				
Diphtheria -----	8	21		29
Malaria -----	1	4		5
Tuberculosis -----	1	9		10
Typhoid (Widal test)-----	8	17		25
				69
San Joaquin Valley Branch at Fresno:				
Diphtheria -----		9		9
Tuberculosis -----	3	1		4
Typhoid (Widal test) -----	3	9	3	15
				28
Southern Branch at Los Angeles:				
Diphtheria -----	23	61	5	89
Gonococcus infection -----		1		1
Malaria -----		1		2
Rabies -----	2			2
Tuberculosis -----		2		2
Typhoid (Widal test)-----		11		11
				106
Total number of examinations-----				459

Division of Preventive Therapeutics.

*Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory
During the Month of July, 1914.*

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley.....	2	10
San Joaquin Valley Branch at Fresno.....	2	3
Southern Branch at Los Angeles.....	5	1
Laboratory of Sacramento Board of Health, by deputized bacteriologist	1	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist	2	0
Laboratory of Los Angeles Board of Health, by deputized bacteriologist	4	5
Laboratory of San Diego City Board of Health, by depu- tized bacteriologist	3	5
	19	24

*Vaccine for the Prevention of Typhoid Fever Issued by the State Hygienic Laboratory
During the Month of July, 1914.*

Number of physicians to whom vaccine was sent..... 49 ✓
 Number of complete treatments sent..... 1,020

Public Health Instruction.

Participation in Instruction in Public Health During July, 1914.

Main Laboratory at Berkeley:
 Bacteriological instruction outfits sent out..... 0
 Bacteriological instruction outfits in use..... 27
 Lectures by the director..... 1
 Lectures and talks by the chief bacteriologist..... 2

Division of Epidemiological Investigations.

Epidemiological Investigations During July, 1914.

Main Laboratory at Berkeley:
 Special investigations by the director..... 3
 Investigation, by physiological tests, of the strengths of tinctures of digi-
 talis and strophanthus found in the market (in cooperation with the
 State Food and Drug Laboratory).
 Investigation of a typhoid infection contracted in the laboratory.
 Investigation of reported cases of typhoid fever in persons who had been
 vaccinated against typhoid fever.
 Special investigations by the chief bacteriologist..... 1
 Completion of an investigation into the bacterial contents of tomato
 products.

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR
JULY, 1914.

M. E. JAFFA, Director.

The State Food and Drug Inspectors have been devoting considerable time during the month of July to the sanitary inspection of meat and poultry, with special reference to cold storage products. This was considered advisable for the purpose of ascertaining whether or not the provisions of the Cold Storage Act were being complied with during the warm season. It is very encouraging to note from the reports of the inspectors that most of the establishments visited were in a clean and sanitary condition, and products in a first class condition. In some instances meat and poultry were found which were unfit for human consumption; these were immediately destroyed and the dealers fully warned concerning this matter.

At the Laboratory there was received about one hundred and twenty samples of foods, drugs and various miscellaneous articles. Of the number mentioned forty were taken up by inspectors, constituting official samples, the remainder being unofficial samples submitted by state institutions with a view of ascertaining whether or not they conformed to the contracts for the respective articles. With very few exceptions the samples from the state institutions were found to be of good quality and fully meeting the requirements, both of the Pure Food Law and the specifications from the institutions.

The following Food Inspection Decision has been received at the Laboratory since the publication of the last monthly bulletin:

Food Inspection Decision 156.¹**Wine.**

As a result of investigations carried on by this department and of the evidence submitted at a public hearing given on November 5, 1913, the Department of Agriculture has concluded that gross deceptions have been practiced under Food Inspection Decision 120. The department has also concluded that the definition of wine in Food Inspection Decision 109 should be modified so as to permit correction of the natural defects in grape musts and wines due to climatic or seasonal conditions.

Food Inspection Decisions 109 and 120 are, therefore, hereby abrogated and, as a guide for the officials of this department in enforcing the Food and Drugs Act, wine is defined to be the product of the normal alcoholic fermentation of the juice of fresh, sound, ripe grapes, with the usual cellar treatment.

To correct the natural defects above mentioned the following additions to musts or wines are permitted:

In the case of excessive acidity, neutralizing agents which do not render wine injurious to health, such as neutral potassium tartrate or calcium carbonate;

In the case of deficient acidity, tartaric acid;

In the case of deficiency in saccharine matter, condensed grape must, or a pure, dry sugar.

The foregoing definition does not apply to sweet wines made in accordance with the Sweet Wine Fortification Act of July 7, 1906 (34 Stats., 215).

A product made from pomace, by the addition of water, with or without sugar or any other material whatsoever, is not entitled to be called wine. It is not permissible to designate such a product as "pomace wine," nor otherwise than as "imitation wine."

D. F. HOUSTON, *Secretary of Agriculture.*

WASHINGTON, D. C., June 12, 1914.

¹In conformity with a uniform plan for the issuance of information, instructions and notices of a regulatory nature by various branches of the department, as prescribed by the Acting Secretary of Agriculture in memorandum No. 57, dated December 26, 1913, this publication will be issued monthly by the Bureau of Chemistry. It covers approximately the entire month for which it is dated, and each month's issue is expected to appear in the early part of the succeeding month. Free distribution will be limited to firms, establishments and journals especially concerned. Others desiring copies may obtain them from the Superintendent of Documents, Government Printing Office, Washington, D. C., at 5 cents each, or 50 cents a year.

The following extracts from the Service and Regulatory Announcements of the Department of Agriculture, for April and May, 1914, are of interest to the readers of this bulletin and others interested in the manufacture and sale of food and drugs.

General Information.

16. Effective date of Food Inspection Decision 156 with respect to wines manufactured prior to June 12, 1914.

Proceedings under the Food and Drugs Act with respect to fermented beverages not prepared in conformity with this decision, but which, it is claimed, have been manufactured in good faith in compliance with either Food Inspection Decision 109 or Food Inspection Decision 120, will not be recommended by the Department of Agriculture, prior to June 12, 1916, if it shall appear, upon investigation, that the articles with respect to which the claim is made were actually manufactured prior to June 12, 1914, and are labeled in conformity with either Food Inspection Decision 109 or Food Inspection Decision 120, as the case may be.

17. Declaration of weight not required on wrapped hams and bacons.

The question has been raised whether the act of March 3, 1913 (37 Stat., 732), known as the Net Weight Amendment to the Food and Drugs Act, requires that the weight of the meat be marked upon the paper, cloth, or gelatin covering with which single hams and single sides or strips of bacon are wrapped or coated.

In the opinion of the department single hams and single sides or strips of bacon when so covered with paper, cloth, or gelatin are not "in package form" within the meaning of the Net Weight Amendment, and consequently it is not required that the quantity of the meat be stated on such coverings.

18. Resignation.

W. L. Dubois, chemist in charge of the Buffalo Laboratory, has resigned. W. J. McGee, chemist in charge of the Washington Food Inspection Laboratory, has taken charge of the Buffalo Laboratory temporarily pending the appointment of a successor to Mr. Dubois.

Opinions of General Interest Regarding Questions Arising Under the Food and Drugs Act—Quoted From Correspondence.¹

45-53. Opinions regarding the weight and volume regulations (F. I. D. 154).

45. Misleading trade terms indicating sizes of containers must not be printed on labels.

The letter quoted below is in reply to a request for the criticism of a carton which contained 4 dozen cans of deviled ham and bore the following statements: In large type, "4 doz. $\frac{1}{4}$ cans"; in smaller type, "Contents of each can 3 oz."

DEAR SIR: While the requirements for branding as given in the regulations for the enforcement of the amendment of March 3, 1913, to the Food and Drugs Act (Food Inspection Decision No. 154) apply particularly to the small cans or units in the package, and the branding of the quantity of the contents upon packing cases containing a number of units branded in conformance with the law and the regulations is not obligatory (see Service and Regulatory Announcements No. 5, Letter 34), nevertheless if the packing cases are branded the statements must be in accordance with the requirements of the act.

The statement reading "4 doz. $\frac{1}{4}$ cans" upon a package of cans containing 3 ounces is considered false and misleading and not in conformance with the requirements of the act, notwithstanding the further statement, made in smaller type, "Contents of each can 3 oz."

Respectfully,

C. L. ALSBERG, *Chief.*

46. The net weight of comb honey.

DEAR SIR: The net weight of comb honey is considered to be the weight of the honey and comb, exclusive of the wooden section. It is believed that the tare weight of these sections is easily ascertained and that the filled sections can be readily sorted into approximately similar weights which may be marked in accordance with paragraph *h* of Food Inspection Decision No. 154.

The individual units must be marked, and the shipping case may be if desired. The marking should be done previous to their introduction into interstate commerce.

While the regulations do not prescribe the manner of marking, as to whether a rubber stamp may be used, the law requires that the statement shall be plain and conspicuous. Stamping by means of anilin ink is frequently illegible owing to failure to print or to the running of the ink. If such a stamp is used, care should be taken to make the statement plain and conspicuous, as required by the act.

Respectfully,

A. S. MITCHELL,

Secretary Committee on Regulations, Net Weight and Volume Law.

¹ It should be understood that the opinions expressed in these letters are offered in an advisory capacity as representing the attitude of the bureau in the light of its present knowledge and of the facts presented by the correspondents. In order to avoid the publication of unnecessary matter, those portions of the correspondence which do not bear on the subject in question have been omitted.

47. Oils of the nature of cottonseed oil should be marked in terms of volume.

DEAR SIR: Referring to your letter regarding the statement of the quantity of the contents upon cottonseed oil, you are informed that in the opinion of this department oils of the nature of cottonseed oil are not viscous substances under ordinary conditions within the meaning of the regulations. Cottonseed oil should, therefore, be considered as a liquid and marked in terms of volume, gallons, half gallons, quarts, pints, and fractions thereof, or, if the quantity is less than 1 pint, in terms of fluid ounces.

Respectfully,

C. L. ALSBERG, *Chief.*

48. The quantity of the contents must be marked in terms of the largest unit contained in the package.

DEAR SIR: Replying to your letter submitting copies of labels reading "_____ Brand, Weight of Contents 16 oz.," you are informed that the marking is not in conformance with the requirements of the regulations as laid down in Food Inspection Decision No. 154. Please note the requirement under paragraph *d* that the quantity of the contents shall be marked in terms of the largest unit contained in the package.

Respectfully,

A. S. MITCHELL,

Secretary Committee on Regulations, Net Weight and Volume Law.

49. Extension of time for the use of labels on which the quantity of contents is not marked in terms of the largest unit contained in the package.

DEAR SIR: Replying to your letter regarding the use of the expression "Contents 26 Fluid Ounces," for the marking of the quantity of the contents upon liquids, you are informed that the form of statement submitted does not comply with the requirements that the statement be made in terms of the largest unit contained in the package, which is in this case 1 pint.

The following decision has been reached by the department concerning labels where there was evident intent to comply with the requirements of the law:

In order to prevent unnecessary destruction of labels and cartons which were printed before the issuance of Food Inspection Decision 154, the department has decided that, prior to June 1, 1915, it will not recommend proceedings solely upon the charge that the statement of the quantity of the contents on a package, if otherwise satisfactory, is not in the terms of the largest unit in the package, provided that upon investigation it is found that the labels or cartons bearing such statements were printed prior to May 11, 1914, and plainly indicate an honest attempt to comply with the provisions of the law.

Respectfully,

C. L. ALSBERG, *Chief.*

50. Use of labels bearing alternative statements of contents not permissible.

DEAR SIR: Replying to your communication asking if it will be permissible to use one label at the same time for large and small bottles of liquids, the label bearing a statement reading:

"Contents: Large bottles 28 oz.
Small bottles 14 oz."

you are informed that a statement of this character is not in compliance with the regulations and is not satisfactory. Each size of bottle should be labeled with a plain statement of the quantity of its contents in terms of the largest unit. The statement upon the large bottles should read "1½ pints" or "1 pt. 12 fl. oz." and upon the small size "14 fluid ounces."

Respectfully,

A. S. MITCHELL,

Secretary Committee on Regulations, Net Weight and Volume Law.

51. Statements of contents blown in bottles must be plain and conspicuous; statements on bottle caps are not considered conspicuous.

DEAR SIR: The Food and Drugs Act as amended by the act of March 3, 1913, provides that the quantity of the contents in the case of food in package form must be plainly and conspicuously marked on the outside of the package. Subdivision *c* of regulation 29 as amended (Food Inspection Decision 154) provides that "the statement of the quantity of the contents shall be plain and conspicuous, shall not be a part of or obscured by any legend or design, and shall be so placed and in such characters as to be readily seen and clearly legible when the size of the package and the circumstances under which it is ordinarily examined by purchasers or consumers are taken into consideration."

It would appear that a statement blown in the bottle would be satisfactory if plain and conspicuous and in conformity in other respects with the regulations. Such a statement should, of course, apply to the quantity of the contents and not to the capacity of the bottle.

I am of the opinion that the statement upon the crown cork submitted with your letter would not be conspicuous within the meaning of the act and would not comply with the terms of the regulation quoted above.

Respectfully,

C. L. ALSBERG, *Chief.*

52. Statements of contents made by means of perforations are not plain and conspicuous.

DEAR SIR: Replying to your communication, there is inclosed a copy of Food Inspection Decision No. 154, containing the regulations under the amendment to the Food and Drugs Act requiring a statement of the quantity of the contents upon food products in package form.

Inasmuch as the statement is required to be plain and conspicuous, statements made by means of perforations in the label or wrapper are deemed not in compliance with this requirement.

Respectfully,

C. L. ALSBERG, *Chief.*

53. Bottled-in-bond goods and bulk packages bearing internal-revenue brands not exempt from requirements as to declaration of contents.

DEAR SIR: The marking of the quantity of the contents upon all packages of food products should be in conformity with the regulation as given in paragraph c of Food Inspection Decision 154.

No decision to the contrary has been rendered regarding the marking of bottled-in-bond goods and bulk packages bearing internal-revenue brands.

Respectfully,

A. S. MITCHELL,

Secretary Committee on Regulations, Net Weight and Volume Law.

54. The term "stringless" not applicable to any one variety of beans.

DEAR SIR: This bureau has taken up the question of the meaning of the term "Refugee Beans" with the Bureau of Plant Industry.

The term "Refugee" is a class name applied to several distinct horticultural varieties of beans which vary markedly in the quality of stringiness.

As was explained in the bureau's letter of a few weeks ago (Bureau of Chemistry Service and Regulatory Announcements No. 3, letter 19), the age of the pod is an important factor in determining the amount of fiber or stringiness in the bean. Some varieties develop fiber earlier than others, and on this account those varieties which are slowest in developing the fibrous character are classed by seedsmen as stringless varieties of beans. It is not thought that the term "stringless" should be confined to any one variety of bean.

Respectfully,

C. L. ALSBERG, *Chief.*

55. Tomatoes with puree.

DEAR SIR: Your letter inquiring as to the attitude of the bureau regarding the sale of tomatoes with puree is at hand.

It is the understanding of the bureau that the term "puree" implies a certain degree of concentration. A product consisting mainly of tomato pulp which has been put through a cyclone or a cyclone and finishing machine would hardly be entitled to the name "puree."

There appears to be no objection to the sale of tomatoes with puree made from trimmings under the label "Tomatoes with Puree," provided the statement that the product is made from trimmings is printed in a conspicuous manner.

One label has come to the attention of the bureau which bears the legend "Puree from Trimmings with Tomatoes" on one face, while the other face bears a picture of a whole tomato, above which is printed the name of the brand and below the name of the canning company. Such a label is not regarded as proper, but no objection will be made to it if the legend "Puree from Trimmings with Tomatoes" is also printed across the face bearing the picture of the tomato.

Respectfully,

C. L. ALSBERG, *Chief.*

56. Meaning of the term "orangeade."

DEAR SIR: Receipt is acknowledged of your letter requesting information concerning the labeling of an orange beverage. It is noted that you state the product is made from orange peel, orange juice, citric acid, sugar, water, and color, and that you have requested information as to whether or not the word "orangeade" may be properly applied to this product.

In reply you are informed that it is the opinion of the bureau that the word "orangeade" should be applied only to a product consisting of orange juice, sugar, and water, flavored with more or less orange peel. The above product, which contains citric acid as a substitute for orange juice, would not, in the opinion of the bureau, be properly described as orangeade. It should be plainly labeled to show that it is an imitation or compound. If the product is termed a compound, the ingredients used, including artificial color, should be plainly stated on the label in connection with the term compound.

Respectfully,

C. L. ALSBERG, *Chief.*

57. Meaning of the term "orangeade powder."

DEAR SIR: You are informed that, in the opinion of the bureau, it would not be proper to apply the term "orangeade powder" to a product made by mixing citric acid, oil of orange, and artificial color. Such a product might be sold under a label which clearly indicates it to be a compound or imitation, as provided for in section 8, paragraph 4, under foods, of the Food and Drugs Act. If labeled as a compound, the ingredients should be stated, including the presence of artificial color.

Respectfully,

C. L. ALSBERG, *Chief.*

58. Calculation of gluten or protein in gluten flour and other wheat products.

DEAR SIR: It is still the practice of many manufacturers and dealers in cereal products to calculate the percentage of protein or gluten in wheat flour and gluten flour by multiplying the percentage of total nitrogen in the product by the factor 6.25.

At the time of the adoption of certain food standards by this department (see Circular No. 19, Office of the Secretary of Agriculture) this factor was generally used, but subsequent investigations have shown it to be incorrect, and in 1911 the Association of Official Agricultural Chemists adopted the factor 5.70. Regulation 4 for the enforcement of the Food and Drugs Act prescribes the methods of analysis adopted by that association for the examination of food products in connection with the enforcement of that act.

It is, therefore, the opinion of this bureau that all statements of protein or gluten content on labels of wheat flour, gluten flour, or other wheat products should be calculated by multiplying the percentage of nitrogen, as determined by the Kjeldahl or Gunning method, by the factor 5.70, and after June 30, 1915, this bureau will regard as misbranded such products in which an excessive amount of gluten or protein is declared on the label owing to the use of the incorrect factor 6.25.

Respectfully,

C. L. ALSBERG, *Chief.*

59. Meaning of the term "hominy feed."

DEAR SIR: We are of the opinion that hominy feed is a mixture of the bran coating, the germ, and part of the starchy portion of the corn kernel obtained in the manufacture of hominy grits for human consumption. We are further of the opinion that hominy feed is adulterated if it contains any or all of the materials which are cleaned from the corn before it is subjected to the actual milling process which finally results in hominy grits. In other words, it does not make any difference whether part of the cleanings from corn are obtained in the elevator and part in the mill; none of these cleanings from the corn is, in our opinion, a proper constituent of hominy feed.

The case is analogous to mixtures of wheat bran and screenings. Some of the screenings may be obtained from the wheat in the elevator and some in the mill, yet they are nevertheless screenings. Wheat bran is the coarse, outer coating of the wheat berry obtained in the usual commercial milling process from wheat that has been cleaned and scoured, and is adulterated if it contains any of the cleanings or screenings obtained from the wheat before it goes to the break rolls.

Respectfully,

C. L. ALSBERG, *Chief.*

60. The labeling of malt sprouts.

DEAR SIR: We have received your communication relative to the proper branding of malt sprouts.

The department has not promulgated any specific ruling relative to this subject, but, under the general provisions of the Food and Drugs Act relative to misbranding, expects that a product which is labeled malt sprouts shall in fact consist of malt sprouts.

We recognize that malt sprouts, because of their method of production, must contain a small amount of barley hulls and small, immature, and broken kernels of malted barley. We also believe it perfectly possible, however, to limit this material, other than malt sprouts, to a reasonable and not excessive amount.

It has been our experience that some of the maltsters of the United States run their machines for detaching malt sprouts from malted barley in such a way that they remove a much larger quantity of the barley hulls than there is any necessity of removing. This results in an excessive amount of barley hulls in the malt sprouts. Not only have we found the above to be true, but we have also found that some of the maltsters add to their malt sprouts the skimmings from the steep tanks, consisting principally of light barley grains and chaff, and the screenings which are cleaned from the barley before it is subjected to the malting process, consisting of weed seeds, chaff, foreign grains, immature and broken barley grains, etc.

The department has never yet recommended a case relative to malt sprouts for prosecution unless the foreign material in the product amounted to 10 per cent or more. While we do not wish to go on record as saying that 10 per cent foreign material such as is described above is allowable in malt sprouts, this has been our limit up to the present time. This limit for foreign material was adopted after a careful investigation of the method of production of malt sprouts and the composition of same, and is believed by us to be an exceedingly generous limit. It is possible that further investigations will show that this limit of allowable foreign matter can be reduced.

We may add that even at the present time if the foreign material in malt sprouts amounted to less than 10 per cent and we could prove that such foreign material had been added to the malt sprouts after they were produced, either in the form of skimmings, screenings, or hulls, we would consider the product adulterated under the provisions of the Food and Drugs Act.

Respectfully,

D. F. HOUSTON, *Secretary of Agriculture.*

REPORT OF BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for June.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: June.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
June—			
Births -----	3,737	3,759	16.5
Deaths -----	3,087	3,057	13.6
Marriages -----	3,485	3,371	15.3
May—			
Births -----	3,730	3,446	15.9
Deaths -----	3,050	3,298	13.0
Marriages -----	3,485	3,371	15.3

The birth and death totals for June were not far from the same in 1914 as in 1913, while the June marriage total was somewhat greater this year than last.

In fact, the June marriage total for 1914 is the highest monthly total reported under the registration law of 1905, the several June totals being as follows: 1914, 3,485; 1913, 3,371; 1912, 3,079; 1911, 2,976; 1910, 2,636; 1909, 2,511; 1908, 2,251; 1907, 2,366; and 1906, 2,342.

The birth registration exceeded the death total for June by 650, or 21.1 per cent.

As to deaths, it may be noted that of the 3,087 decedents in June, some 126, or 4.1 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

Birth, Death and Marriage Totals, for Principal Counties: June.

County	June, 1914		
	Births	Deaths	Marriages
California -----	3,737	3,087	3,485
Counties of more than 25,000 population (1910):			
Alameda -----	358	316	335
Butte -----	37	26	30
Contra Costa -----	60	32	28
Fresno -----	126	98	92
Humboldt -----	32	36	45
Kern -----	49	40	55
Los Angeles -----	1,025	748	850
Marin -----	15	9	91
Orange -----	41	48	142
Riverside -----	50	40	48
Sacramento -----	119	99	106
San Bernardino -----	110	100	78
San Diego -----	104	94	139
San Francisco -----	634	545	667
San Joaquin -----	64	80	71
San Mateo -----	36	42	29
Santa Barbara -----	43	30	34
Santa Clara -----	114	117	126
Santa Cruz -----	29	21	27
Solano -----	31	22	18
Sonoma -----	57	56	58
Tulare -----	64	46	37
Selected groups:			
San Francisco and other bay counties-----	1,103	944	1,150
Los Angeles and Orange counties-----	1,066	796	992

Birth and Death Totals, for Principal Cities: June.

City	June, 1914	
	Births	Deaths
Freeholders' charter cities-----	2,319	1,798
Cities of more than 15,000 population (1910):		
Alameda -----	34	28
Berkeley -----	65	37
Fresno -----	45	30
Long Beach -----	46	44
Los Angeles -----	710	470
Oakland -----	226	180
Pasadena -----	55	38
Riverside -----	31	19
Sacramento -----	87	83
San Diego -----	63	65
San Francisco -----	634	545
San Jose -----	49	40
Stockton -----	22	34
Selected groups:		
San Francisco -----	634	545
Oakland, Alameda and Berkeley-----	325	245
Total, bay cities-----	959	790
Los Angeles -----	710	470
Neighboring cities -----	136	107
Totals -----	846	577

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Month, for California: June.

Cause of death	Deaths: June	Proportion per 1,000	
		June	May
All causes -----	3,087	1,000.0	1,000.0
Typhoid fever -----	27	8.7	8.5
Malarial fever -----	8	2.6	1.6
Smallpox -----			0.3
Measles -----	21	6.8	6.2
Scarlet fever -----	8	2.6	2.3
Whooping-cough -----	36	11.7	9.5
Diphtheria and croup -----	19	6.2	7.5
Influenza -----	4	1.3	1.0
Other epidemic diseases -----	8	2.6	4.9
Tuberculosis of lungs -----	392	127.0	121.3
Tuberculosis of other organs -----	67	21.7	31.2
Cancer -----	212	68.7	76.1
Other general diseases -----	183	43.1	43.3
Meningitis -----	27	8.7	9.2
Other diseases of nervous system -----	256	82.9	83.0
Diseases of circulatory system -----	511	165.5	177.4
Pneumonia and broncho-pneumonia -----	174	56.4	61.3
Other diseases of respiratory system -----	61	19.8	19.3
Diarrhea and enteritis, under 2 years -----	85	27.5	26.9
Diarrhea and enteritis, 2 years and over -----	43	13.9	11.8
Other diseases of digestive system -----	182	59.0	48.2
Bright's disease and nephritis -----	206	66.7	58.4
Childbirth -----	35	11.3	8.5
Diseases of early infancy -----	107	34.7	38.4
Suicide -----	84	27.2	23.9
Other violence -----	257	83.2	77.7
All other causes -----	124	40.2	42.3

In June there were 511 deaths, or 16.6 per cent of all, from diseases of the circulatory system and 459, or 14.9 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis considerably.

Other notable causes of death in June were: Violence, 341; diseases of the digestive system, 310; diseases of nervous system, 283; diseases of respiratory system, 235; cancer, 212; Bright's disease and nephritis, 206; and epidemic diseases, 131.

The deaths from epidemic diseases were as follows: Whooping-cough, 36; typhoid fever, 27; measles, 21; diphtheria and croup, 19; malarial fever and scarlet fever, each 8; and all other epidemic diseases, 12.

The deaths from the four leading epidemic diseases reported for the month were distributed by counties as follows:

Whooping-cough		Typhoid fever		Measles	
Alameda	6	Alameda	3	Alameda	8
Amador	1	Butte	1	Butte	1
Calaveras	1	Fresno	3	Humboldt	1
Colusa	1	Imperial	3	Los Angeles	2
Fresno	2	Kern	3	Sacramento	4
Humboldt	1	Los Angeles	4	San Bernardino	1
Kern	1	Mendocino	1	San Francisco	2
Kings	2	Merced	1	Santa Barbara	1
Los Angeles	2	San Diego	1	Santa Clara	1
Merced	1	San Francisco	3		
Monterey	2	San Joaquin	1	Total	21
Napa	1	Santa Clara	1	Diphtheria and croup	
Sacramento	3	Solano	1	Alameda	4
San Francisco	4	Yolo	1	Imperial	1
Santa Clara	3	Total	27	Los Angeles	2
Shasta	1			Napa	1
Solano	2			Nevada	1
Tulare	1			Riverside	2
Yolo	1			San Francisco	6
Total	36			Tulare	1
				Yolo	1
				Total	19

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: June.

Geographic division	Deaths: June										
	All causes -----	Epidemic diseases -----	Tuberculosis (all forms) -----	Cancer -----	Diseases of nervous sys- tem -----	Diseases of circulatory system -----	Diseases of respiratory system -----	Diseases of di- gestive system -----	Bright's disease and nephritis -----	Violence -----	All other causes -----
THE STATE-----	3,087	131	459	212	283	511	235	310	206	341	399
Northern California-----	325	19	50	19	41	63	24	26	10	38	35
Coast counties -----	175	8	27	12	25	30	14	11	6	23	19
Interior counties -----	150	11	23	7	16	33	10	15	4	15	16
Central California-----	1,658	87	224	106	131	286	145	175	110	185	209
San Francisco -----	545	18	96	47	38	110	43	45	35	59	54
Other bay counties---	399	23	45	24	32	72	48	37	24	41	53
Coast counties -----	198	7	24	14	17	34	12	24	15	19	32
Interior counties -----	516	39	59	21	44	70	42	69	36	66	70
Southern California-----	1,104	25	185	87	111	162	66	109	86	118	155
Los Angeles -----	748	13	114	61	69	125	44	76	64	75	107
Other counties -----	356	12	71	26	42	37	22	33	22	43	48
Northern and Central California-----	1,983	106	274	125	172	349	169	201	120	223	244
Metropolitan area ---	944	41	141	71	70	182	91	82	59	100	107
Rural counties -----	1,039	65	133	54	102	167	78	119	61	123	137

Sex, Race and Nativity.—The proportion of the sexes among the 3,087 decedents in June was: Male, 1,888, or 61.2 per cent; and female, 1,199, or 38.8 per cent.

The race distribution of decedents was: White, 2,923, or 94.7 per cent of all; Japanese, 53; Negro, 49; Chinese, 46; and Indian, 16.

The 2,923 white decedents were classified by nativity as follows: California, 815, or 27.9 per cent; other states, 1,164, or 39.8 per cent; foreign countries, 878, or 30.0 per cent; and unknown, 66, or 2.3 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: June.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
All ages -----	3,087	1,888	1,199	100.0	100.0	100.0
Under 1 year-----	325	193	132	10.5	10.2	11.0
1 to 4 years-----	151	76	75	4.9	4.0	6.2
5 to 9 years-----	59	33	26	1.9	1.7	2.2
10 to 19 years-----	121	69	52	3.9	3.7	4.3
20 to 29 years-----	269	165	104	8.7	8.7	8.7
30 to 39 years-----	315	196	119	10.2	10.4	9.9
40 to 49 years-----	348	225	123	11.3	11.9	10.3
50 to 59 years-----	413	264	149	13.4	14.0	12.4
60 to 69 years-----	443	296	147	14.4	15.7	12.3
70 years and over-----	643	371	272	20.8	19.7	22.7

This table shows that relatively more females than males died at the age periods under 30 years as well as 70 years and over, while relatively more males than females died at the age periods from 30 to 69 years.

Length of Residence.—The table below gives the number and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: June.

Length of residence	Deaths	Per cent
Total -----	3,087	100.0
Under 1 year-----	126	4.1
1 to 9 years-----	604	19.6
10 years and over-----	1,214	39.3
Life -----	867	28.1
Unknown -----	276	8.9

It appears from this table that 4.1 per cent of all decedents had resided in California less than one year, and altogether 23.7 per cent had lived in the State under ten years. Residents of ten years' standing comprised 39.3 per cent of all decedents, and native Californians who had been here for life comprised 28.1 per cent, the length of residence being unknown for 8.9 per cent of all decedents.

MORBIDITY REPORTS.

Smallpox.

There were fewer cases of smallpox reported during July than at any time for over a year. Eighteen cases were reported from ten counties of the State. There was no outbreak reported, although indications would tend to show that the disease is endemic in parts of Humboldt County, and investigation of conditions existing at Fernaldale, in that county, regarding the presence of smallpox, is being undertaken at the present time. Of the 18 cases reported, 8 had never been successfully vaccinated. Two had been vaccinated more than seven years preceding attack, one had been vaccinated within the seven years preceding attack, and no vaccination history was obtainable for seven cases. It is probable that the investigation now being made in Humboldt County will reveal a number of cases which had been diagnosed as smallpox.

Typhoid Fever.

At this time of the year there is a marked increase in the number of cases of typhoid fever reported, 196 being the number for July. Fifty of these cases occurred in Sacramento, the use of polluted river water being the source of infection for nearly all of the cases. It must be added, that nearly half of the 50 cases were brought into the city of Sacramento from outlying rural districts. There were a number of cases in Contra Costa and Imperial counties and an outbreak occurred at Copperopolis in Calaveras County. These cases were not reported by the County Health Officer, however.

Diphtheria.

One hundred and eighteen cases of diphtheria were reported, a slight decrease over June, during which month 186 cases occurred throughout the State.

Scarlet Fever.

One hundred and forty cases of scarlet fever were reported, a smaller number than for June, when 152 were reported.

Pneumonia.

Sixty-three cases were reported, about the same number as is reported every month.

Poliomyelitis.

This disease shows an increase. Twelve cases were reported in Hanford. Two of the cases in the latter city were fatal. During the summer and fall months poliomyelitis generally shows an increase. It is probable that August and September will bring a larger number of cases.

Tuberculosis.

Efforts to secure complete reports of tuberculosis cases are bringing results, as 517 cases were reported during July—more than have been reported for several months. Health officers throughout the State are

expected to report all cases of this disease that occur and it is hoped that August will bring still more complete returns.

Whooping-cough.

There are only 19 cases of whooping-cough, as against 219 for June, and 428 for May. This disease generally shows a decrease during the summer months.

Chickenpox.

Chickenpox likewise shows a decrease, there being only 76 cases reported during July.

Measles.

Measles is also one of the diseases which generally show a marked decrease during the summer months. Five hundred and eighty-seven cases were reported during the month, as against 890 cases for June and 1,572 cases for May.

Epidemic Cerebrospinal Meningitis.

Five cases of this disease were reported during July. One case occurred in each of the following counties: Los Angeles, Merced, Monterey, San Francisco, and Tulare.

Trachoma.

Two cases of trachoma were reported during July, both of these occurring in Modoc County.

Tetanus.

Two cases of tetanus were reported in San Francisco and one in Lordsburg, Los Angeles County.

Gonococcus Infection.

Thirty-three cases of this disease were reported during July.

Syphilis.

There were 39 cases of syphilis during July. Nearly half of these having been reported through Wasserman reactions which were performed at the State Hygienic Laboratory.

Pellagra.

Four cases of pellagra were reported during the month, 3 from Los Angeles and 1 from San Diego.

Smallpox.

Distribution of Cases reported during July, 1914.

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vaccinated more than seven years preceding attack	Number never successfully vaccinated	Vaccination history not obtained or uncertain
Alameda County:						
Berkeley -----	1					1
Oakland -----	1			1		
Humboldt County:						
Fortuna -----	1					1
Los Angeles County -----	1					1
Los Angeles -----	2				2	
Orange County -----	1				1	
Orange -----	1				1	
Sacramento County:						
Sacramento -----	2		1		1	
San Francisco -----	4			1	1	2
San Joaquin County:						
Stockton -----	1				1	
Santa Barbara County -----	1					1
Stanislaus County -----	1					1
Tulare County -----	1				1	
Totals -----	18		1	2	8	7

Typhoid Fever.

Distribution of Cases reported during July, 1914.

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----	1	Orange County -----	3
Alameda -----	2	Riverside County -----	3
Berkeley -----	4	Banning -----	1
Oakland -----	3	Sacramento County:	
Pleasanton -----	1	Sacramento -----	50
Amador County:		San Bernardino County -----	2
Sutter Creek -----	3	Colton -----	1
Colusa County -----	3	Ontario -----	3
Contra Costa County -----	6	San Bernardino -----	3
Richmond -----	2	San Diego County:	
Fresno County:		Chula Vista -----	1
Selma -----	3	San Francisco -----	35
Imperial County -----	7	San Joaquin County:	
Calexico -----	5	Stockton -----	2
Lake County -----	1	Santa Clara County -----	1
Lakeport -----	2	Palo Alto -----	1
Los Angeles County:		Siskiyou County:	
Glendale -----	2	Yreka -----	1
Los Angeles -----	26	Montague -----	1
Pasadena -----	1	Sonoma County -----	1
Madera County -----	1	Santa Rosa -----	1
Marin County:		Stanislaus County -----	1
San Rafael -----	1	Oakdale -----	1
Mariposa County -----	1	Tehama County:	
Mendocino County:		Red Bluff -----	1
Willits -----	2	Tuolumne County -----	1
Merced County -----	1	Yolo County -----	1
Merced -----	1	Yuba County -----	1
Napa County:			
Napa -----	1	Total -----	196

Poliomyelitis (Infantile Paralysis).*Distribution of Cases reported during July, 1914.*

Counties and cities	Number of new cases reported
Alameda County:	
Oakland -----	1
Kings County:	
Hanford -----	4
Los Angeles County -----	1
Los Angeles -----	2
Nevada County:	
Nevada City -----	1
San Francisco -----	3
Total -----	12

Epidemic Cerebrospinal Meningitis.*Distribution of Cases reported during July, 1914.*

Counties and cities	Number of new cases reported
Los Angeles County:	
Huntington Park -----	1
Merced County:	
Merced -----	1
Monterey County:	
Salinas -----	1
San Francisco -----	1
Tulare County -----	1
Total -----	5

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.*Reported during June, 1914.*

Disease	Total number of new cases reported during the month in the entire State
Scarlet fever -----	140
Measles -----	587
Diphtheria -----	118
Chickenpox -----	76
Erysipelas -----	27
Gonococcus infection -----	33
German measles -----	4
Malaria -----	38
Pneumonia -----	63
Mumps -----	2
Syphilis -----	39
Tuberculosis -----	517
Whooping-cough -----	98
Pellagra -----	4
Tetanus -----	3
Trachoma -----	2

SEPTEMBER BULLETIN.

REPORT OF THE BUREAU OF ADMINISTRATION FOR AUGUST, 1914.

JOHN F. LEINEN, Director.

Additional reports have been received from Dr. S. S. Bogle, County Health Officer of Sonoma County, relative to conditions in the hop yards in his county. Copies of these reports were sent to the Commission of Immigration and Housing.

Complaint has been received regarding pollution of the Russian River by the effluent of the septic tank at Ukiah. Blanks have been sent Ukiah on which to make formal application for permission to discharge the effluent from its septic tank into the river.

Complaints are received regarding the disposal of College Park's sewage. These complaints were referred to the County Health Officer, who has reported that they were well founded.

Complaint is received regarding the outfall sewer at Hyperion, Los Angeles County. This complaint was referred to the health officer with the request that he investigate and report.

Complaints have been received regarding the slaughterhouse in Sonoma County and have been referred to the County Health Officer, Dr. S. S. Bogle, for investigation and report.

A number of cases of typhoid fever having developed in Chico, the health officer requested examination of the source of certain water. The Hygienic Laboratory found certain wells to be contaminated. Against the health officer's advice, some of the people continued to use the water from these wells. The Board is in receipt of a request from the health officer relative to his authority to permanently close these wells. The matter has been referred to the Board's attorney for an opinion.

The Hygienic Laboratory has reported upon the following samples of water submitted for analysis and the reports are now on file in this office: Chico wells; the cities of Jackson, Benicia, Rocklin, and Dorris; water from the well at Fifth and R streets, Sacramento, proposed supply for use in the State Capitol (this water was also examined by Professor M. E. Jaffa); McCormick Company, Soulsbyville; Southern Pacific supply at East Auburn; Utica Mining Company; Angels Camp; wells at Livermore, Alameda County; and samples taken from the restaurants, hotel dining-rooms and soda fountains of Sacramento.

Clyde J. Stuart was appointed a special inspector for the investigation of places where food and drink are served. Mr. Stuart has investigated these places in Sacramento and reported upon same and his reports are on file in this office. He is at present in Merced.

Mr. Edward T. Ross has investigated and reported upon the following places during the past month: Key Route steamers San Francisco, Fernwood, Claremont and San Jose; steamer Napa City and steamer Sehome; California Fruit Cannery's cannery and Pacific Coast Canning Company's cannery; Tassahara Hot Springs; Paraiso Hot Springs; cannery owned by J. F. Flickenger; cannery owned by Golden

Gate Packing Company; Smith Creek Hotel; Camp Wildwood; Congress Springs; Happy Land Camp; Wake Robin Inn; Raymond's Summer Resort; John Lund Ranch. The following Sacramento business places: Robert D. Finnie, grocery; J. Meyer, saloon; Frank Stranberg, bakery; Robinson & Farrel, meat market; W. S. George and Leonardo, Savoy Grill; A. Zangerle, bakery; Christ Antonona, candy factory; A. Karkanopa, creamery; L. Parch, restaurant; Capitol Candy and Cracker Company; Vienna Bakery; Sutter Candy Company; Gribel Bakery.

In consequence of a request from Dr. F. H. Mead, Health Officer of San Diego city, for a ruling on the liability of a physician for refusal to give street address of parents on birth certificates for children born in maternity hospitals, a formal opinion was obtained from the attorney for the State Board of Health on the matter. The attorney's conclusion, in brief, is that a physician "may be required, under pain of arrest for a misdemeanor, for failure to furnish the street address of parents of children born in maternity hospitals, when the State Registrar requires such street address to be given in birth certificates." A copy of the attorney's opinion in full has been sent to Dr. Mead at San Diego.

Dr. C. R. Blake, Health Officer of Richmond city, presented an inquiry as to his authority to issue a permit for the removal of a body to some other place where in a coroner's case he has not yet received (as local registrar) the result of the inquest and the cause of death is unknown. Consequently, a formal opinion has been obtained from the attorney for the State Board of Health, and a copy has been duly sent to Dr. Blake, as to the issuance of a removal permit before the filing of the certificate of death.

The August number of the California State Journal of Medicine is devoted to tuberculosis, and contains the suggestion that a tuberculosis meeting be held at the time of the American Medical Association, or the Association for the Advancement of Science. This number contains the report of the Bureau of Tuberculosis delivered at the April, Santa Barbara meeting, together with valuable articles on the question of tuberculosis in California.

A letter was received from Mr. T. C. Cuvellier, Executive Secretary of the Alameda County Society for the Study and Prevention of Tuberculosis, requesting that the Director of the Bureau of Tuberculosis be present at a joint meeting of the board of directors and executive committee of the society to be held Wednesday evening, September 2d, for the purpose of reading a paper presented before the State Medical Society at Santa Barbara, and of giving a talk upon methods of anti-tuberculosis work in the Eastern States. The letter also contained an offer of cooperation of the Oakland society with the Tuberculosis Bureau.

A letter from the Secretary of the California Association for the Study and Prevention of Tuberculosis was received stating that a meeting was held in Los Angeles, and that the services of an executive secretary have been procured in the person of Miss E. L. M. Tate of Milwaukee, Wisconsin, who is to receive a salary of \$200.00 a month and traveling expenses for the months of October, November and December, 1914. It was also decided to hold a meeting with the State Medical Society without a special tuberculosis program for the meeting.

Dr. Thos. Chalmers Myers of Los Angeles reported two cases of ptomaine poisoning, both patients suffering from botulismus. The attack in both cases was of great severity and was fatal. Neufchatel cheese used in a salad is supposed to have been the source of infection.

Dr. R. F. Winchester, City Health Officer at Santa Barbara, reported a case of smallpox in the Faith mission. About twenty persons were exposed to the disease in this rooming house. The patient was sent to the county hospital and quarantine established. No new cases have appeared.

The city of Stockton made application for a temporary permit to discharge its sewage into the San Joaquin River just above the Santa Fe Railway bridge, above Burns' Cutoff. The matter was referred to the Consulting Engineer, who recommended that the application be granted. The Consulting Engineer's recommendation was approved by the Secretary.

REPORT OF THE BUREAU OF TUBERCULOSIS FOR AUGUST, 1914.

BURT F. HOWARD, Director.

Registration of tuberculosis has been the principal work of the Bureau for August, the first three weeks being devoted chiefly to indexing returns and to completing the task of informing the physicians of the State regarding the law. Blanks for reporting tuberculosis have been mailed to all the physicians of the State, except in San Francisco, Oakland, and Los Angeles, where the local health authorities attend to securing complete returns. As it is seldom that the whole State is circularized by the Board of Health in this way, it was thought worth while to include with the tuberculosis report blanks a list of diseases reportable by law, including tuberculosis. These cards are perforated so that physicians may hang them where they will serve as a reminder and be convenient for reference.

Work upon the index, or register of tuberculosis cases, has consisted in copying the name, address and date of each report for an alphabetical file of the whole State, the complete reports being filed by counties. This arrangement facilitates the compilation of local statistics, and at the same time permits ready reference for the elimination of the records of those dying, as well as an opportunity for following migration within the State. It is necessary, of course, in order that the register may be confined to the living, to check against all deaths reported within the State regardless of cause. This requires much time and labor, as there are over 3,000 deaths a month.

Reports were submitted to the Board of Health upon Colfax Hospital for tuberculosis patients and upon the Colfax School for the Tuberculous, thus completing reports of institutions inspected.

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR AUGUST, 1914.

ANNA C. JAMMÉ, R.N., Director.

The report of inspection of forty-nine training schools for nurses was presented to the Board at the regular meeting on September 5th. From this report it is found that all these schools are maintaining a three-year course; thirty-seven are giving a general training, namely: medical, surgical and obstetrical nursing, also the nursing of sick children. In twelve schools the course of instruction is systematized and graded; in twenty-five schools the course is undergoing revision for the coming year. Eleven have not sufficient facilities for conducting a school according to the requirements of the law, and eleven have unsuitable living conditions for their students.

In two hospitals where facilities are not sufficient affiliation has been arranged in order that students may be able to meet the requirements for examination and registration. Affiliation is recommended where it is found that the home school does not provide for adequate experience.

Where students are in crowded and unsanitary quarters it is recommended that proper provision shall be made or students removed. In several instances outdoor sleeping has been provided by the hospital by the erection of a sufficiently large tent-house. When the problem of housing the nurses is difficult, this proposition has been found economical and acceptable and of benefit to the health of the students.

The character and reputation of the school is influenced to a degree by the conditions under which the students live and study. This is leading to the erection of buildings for this purpose, providing for single and double sleeping rooms with a sufficient number of bath rooms, library and reception rooms. The dormitory system is gradually disappearing. In two cases the home is in charge of a responsible matron, and in three, of a graduate nurse.

A pamphlet containing the Requirements for Accredited Training Schools for Nurses and a recommended course of study may be obtained on request by writing to the Bureau of Registration of Nurses, State Board of Health, Sacramento.

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR AUGUST, 1914.

WILBUR A. SAWYER, M.D., Director.

J. C. GEIGER, M.D., Chief Bacteriologist.

Physiological Tests of Tinctures of Digitalis.

Tincture of digitalis is a powerful drug used for the purpose of stimulating the heart. Large variations in the strength of the drug would prevent accurate dosage and would occasionally result in serious injury or death. Recently samples of tincture of digitalis were officially taken from five different drug stores by an inspector for the State Food and Drug Laboratory, and were sent to the State Hygienic Laboratory to be tested physiologically. The method of Worth Hale (Bull. No. 74, Hygienic Laboratory, U. S. Public Health Service) was followed. The strengths of the five samples, in terms of the dose per gram of body weight just capable of arresting the beat of the ventricle of a frog's heart, were found to be as follows: 0.014 c.c., 0.015 c.c., 0.014 c.c., 0.014 c.c., 0.014 c.c. A tincture freshly prepared from English leaves in the State Food and Drug Laboratory gave a reading of 0.010 c.c. In this small series of tests the market samples showed a marked uniformity, but were distinctly weaker in physiological action than a control tincture freshly made from English leaves according to the requirements of the United States Pharmacopœia. Two samples of another heart stimulant, tincture of strophanthus, were found to be stronger than a specially prepared control tincture of that drug.

At present there are no official standards of strength for these drugs as determined by physiological test. The need for the establishment of such standards is obvious.

A Typhoid Fever Epidemic in Healdsburg.

An epidemic of typhoid fever in Healdsburg was investigated in August by the Director of the Hygienic Laboratory and traced to the city water. Over sixty cases came down between July 17th and the end of August. The city water is now being made safe by treatment with hypochlorite. Laboratory tests, made before the hypochlorite treatment was instituted, showed that the water at the pumping plant and in the mains contained intestinal bacteria (colon bacilli). The water comes from shallow wells in the sand and gravel of the bed of the Russian River. One mile above the wells fresh sewage was found entering the river.

The investigation shows that natural filtration through the gravel beds of our streams can not be depended upon to purify polluted water.

Smallpox in Humboldt County.

Owing to complaints that smallpox was existing, unrecognized, in parts of Humboldt County, and that persons coming from there were bringing the disease into other communities, Dr. J. C. Geiger of the State Hygienic Laboratory was sent by the State Board of Health to investigate. He found cases of smallpox in Eureka, Ferndale, and Rohnerville, and gave directions to the local officials regarding the precautions to be taken.

Division of Biological Examinations.

Summary of Examinations Made in the California State Hygienic Laboratory During the Month of August, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----	2	2	-----	4
Diphtheria -----	19	39	5	63
Gonococcus infection -----	-----	-----	1	1
Hookworm -----	-----	1	-----	1
Malaria -----	3	5	-----	8
Rabies -----	4	5	1	10
Syphilis (Wassermann test) -----	8	35	10	53
Tuberculosis -----	6	21	1	28
Typhoid (Widal test) -----	62	46	2	110
Typhoid (blood culture) -----	-----	1	-----	1
Water pollution -----	63	32	7	102
Miscellaneous -----	1	5	3	9
				<hr/> 390
Northern Branch at Sacramento:				
Diphtheria -----	3	19	-----	22
Gonococcus infection -----	-----	2	-----	2
Malaria -----	-----	2	-----	2
Tuberculosis -----	-----	9	-----	9
Typhoid -----	9	22	-----	31
				<hr/> 66
San Joaquin Valley Branch at Fresno:				
Diphtheria -----	-----	2	-----	2
Gonococcus infection -----	1	-----	-----	1
Hookworm -----	-----	1	-----	1
Malaria -----	-----	3	-----	3
Tuberculosis -----	1	2	-----	3
Typhoid -----	-----	6	-----	6
				<hr/> 16
Southern Branch at Los Angeles:				
Diphtheria -----	12	17	1	30
Tuberculosis -----	2	1	-----	3
Typhoid -----	1	5	-----	6
				<hr/> 39
Total number of examinations -----	-----	-----	-----	<hr/> <hr/> 511

Division of Preventive Therapeutics.

*Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory
During the Month of August, 1914.*

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley.....	1	2
Northern Branch at Sacramento.....	0	0
San Joaquin Valley Branch at Fresno.....	0	0
Southern Branch at Los Angeles.....	2	7
Laboratory of Sacramento Board of Health, by deputized bacteriologist	2	3
Laboratory of San Francisco Board of Health, by deputized bacteriologist	1	2
Laboratory of Los Angeles Board of Health, by deputized bacteriologist	0	0
Laboratory of San Diego City Board of Health, by depu- tized bacteriologist	3	3
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist	1	1
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist.....	0	0
	10	18

*Vaccine for the Prevention of Typhoid Fever Issued by the State Hygienic Laboratory
During the Month of August, 1914.*

Number of physicians to whom vaccine was sent.....	40
Number of complete treatments sent.....	957

Public Health Instruction.

Participation in Instruction in Public Health During August, 1914.

Main Laboratory at Berkeley:	
Bacteriological instruction outfits sent out.....	0
Bacteriological instruction outfits in use.....	26
Lectures or talks by the Director.....	2

Division of Epidemiological Investigations.

Epidemiological Investigations During August, 1914.

Main Laboratory at Berkeley:	
Special investigations by the Director.....	3
Investigation of a water-borne typhoid epidemic at Healdsburg.	
Beginning of an investigation of a disease reported to be prevalent among the veterans of the Spanish war.	
Completion of an investigation, by physiological tests, of the strengths of tinctures of digitalis and stropanthus found in the market (in cooperation with the State Food and Drug Laboratory).	
Special investigations by the Chief Bacteriologist.....	1
Investigation of smallpox in Humboldt County.	

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR AUGUST, 1914.

For the month of August there were nearly 150 samples of food, drugs and miscellaneous materials examined. The miscellaneous materials included samples of blankets, paper, washing powders, oils, turpentine, etc., furnished the state institutions.

Of the samples received, two thirds were official and one third unofficial. Practically one third of the official samples, submitted to the Laboratory for examination this month, consisted of aromatic spirits of ammonia and sweet spirits of nitre. It is still to be regretted that the quality of these two drugs is far from what it ought to be.

The following Food Inspection Decision has been received at the Laboratory since the publication of the last monthly bulletin:

FOOD INSPECTION DECISION 157.

Amending Regulation 29, which relates to marking the quantity of food in package form.

Paragraph (h) of regulation 29 of the Rules and Regulations for the Enforcement of the Food and Drugs Act is hereby amended by striking out the words "minimum weight 16 oz." and inserting in lieu thereof the words "minimum weight 10 oz.," so that paragraph (h) as amended shall read as follows:

The quantity of the contents may be stated in terms of minimum weight, minimum measure, or minimum count, for example, "minimum weight 10 oz.," "minimum volume 1 gallon," or "not less than 4 oz.;" but in such case the statement must approximate the actual quantity and there shall be no tolerance below the stated minimum.

The above decision modifies paragraph H of Regulation 29, as given in Food Inspection Decision 154, issued May, 1914.

Regulation 29, as represented by Food Inspection Decisions 154 and 157 of the Federal law, corresponds to Regulation 28 of the California law. Therefore, those interested in this matter should bear this fact in mind.

The following extracts from the Service and Regulatory Announcements of the Department of Agriculture, for July, 1914, are of interest to the readers of this bulletin and others interested in the manufacture and sale of food and drugs:

19. Interstate shipment of filthy, decomposed, or putrid animal or vegetable substances prohibited, unless the products are denatured so as to prevent their use as food.

Section 6 of the Food and Drugs Act states that "the term 'food,' as used herein, shall include all articles used for food, drink, confectionery, or condiment by man or other animals, whether simple, mixed, or compound." Section 7, paragraph 6, under foods, states that a product is adulterated "if it consists in whole or in part of a filthy, decomposed, or putrid animal or vegetable substance," etc.

It has come to the attention of the department that certain food products which consist in whole or in part of decomposed material, such, for example, as frozen or dried eggs, are sometimes shipped in interstate commerce ostensibly for technical purposes and not for use as food. These products are shipped without labels or under labels indicating that they are intended for technical purposes and not for food. In either case there is nothing to prevent the use of the products for food purposes by the consignee, and it is known that such disposition has at times been made of them.

It is the opinion of the department that products of this character are decomposed food products within the meaning of the act as quoted above, and seizure will, therefore, be recommended in all cases of interstate shipments of such products. This course will be followed regardless of the labels under which the products are sold, since the label provides no obstacle against their use for food purposes. No action will be taken, however, in the case of decomposed food products which have been denatured in such a way as to prevent their use for food purposes.

The attitude of the department as above defined, in so far as it applies to shipments of decomposed food products bearing no labels, is in accordance with the decision of the United States District Court for the Southern District of New York in the case of *The United States vs. Thirteen Crates of Frozen Eggs* (F. & D. No. 4012, S. No. 1390, N. J. 2859, 208 Fed. Rep., 950). Adulteration of this product was alleged for the reason that each of the thirteen crates contained an article of food, which, being animal substance, was in whole or in part filthy, putrid, or decomposed. In directing the jury to return a verdict in favor of the Government, the court said in part that eggs of this character, not denatured, come squarely within the definition of an adulterated article of food, without regard to the purpose or intent of the owner in transporting or selling them, but that if these eggs had been denatured, so as to destroy them as an article of food, no action would have been possible under the Food and Drugs Act. The decision of the District Court was affirmed by the Circuit Court of Appeals for the Second Circuit on June 10, 1914.

20. Manufacturers must show that food products shipped in interstate commerce after September 3, 1914, without declaration of contents, were manufactured prior to that date.

The question has been frequently raised whether it will be necessary for manufacturers to show that food products shipped in interstate commerce without the weight on the label were manufactured prior to September 3, 1914.

While this question, being purely legal, can not be authoritatively determined by the Department of Agriculture, and must be decided eventually by the courts, the views of the department are:

First—That the penalties of the act of fine, imprisonment, or confiscation can not be enforced for violation of the net-weight amendment in respect to domestic food products prepared, or foreign food products imported, prior to September 3, 1914.

Second—That if, after September 3, 1914, packages of food products not marked as required by this amendment be shipped in interstate or foreign commerce, or otherwise brought within the jurisdiction of the Food and Drugs Act, the burden will be upon the person guilty of the violation to show that the article, if domestic, was prepared, or, if foreign, was imported, prior to September 3, 1914.

Third—Persons guilty of violations who can not make proof that the preparation in the case of domestic, or importation in the case of foreign, food products was prior to September 3, 1914, will be subject to the penalties of the Food and Drugs Act.

OPINIONS OF GENERAL INTEREST REGARDING QUESTIONS ARISING UNDER THE FOOD AND DRUGS ACT—QUOTED FROM CORRESPONDENCE.¹

- 61-66. Opinions regarding the weight and volume regulations (F. I. D. 154).

61. Statement of contents on fruit in package form.

DEAR SIR: The requirement of subdivision (a) of regulation 29 as amended (F. I. D. 154), that the statement shall be "on the outside of the covering or container usually delivered to consumers," was intended to indicate which covering should bear the statement when more than one container was used. It was not intended to imply that packages of food products might be sold unmarked.

The question as to whether a certain article constitutes "food in package form" within the meaning of the act of March 3, 1913, amending the Federal Food and Drugs Act, is a question of law which can not be finally determined by this department. In the opinion of the department, however, apples and other varieties of fruit packed in barrels or boxes, potatoes in sacks, and fruit in crates or baskets are all food in package form within the meaning of the law, and should be marked with the quantity of the contents in accordance with regulation 29, as amended by Food Inspection Decision 154.

You ask—

"Am I right in my understanding that this law applies only to the package in which commodities were originally packed? The question arises in the case of a groceryman who buys six or eight barrels of apples on the public market, takes them to his store, and distributes them in peck, quart, and half-bushel lots. He may send these out in baskets or paper sacks. Is it expected that under these circumstances he shall also be required to mark each package he sends out?"

In the opinion of the department the net-weight amendment to the Federal Food and Drugs Act does not apply where the goods are not in package form at the time of sale in the District of Columbia or in the Territories or at the time of shipment in interstate or foreign commerce.

The department is unable to agree with you that a statement of the quantity of the contents is not required on repacked articles. If in package form and otherwise

¹It should be understood that the opinions expressed in these letters are offered in an advisory capacity as representing the attitude of the bureau in the light of its present knowledge and of the facts presented by the correspondents. In order to avoid the publication of unnecessary matter those portions of the correspondence which do not bear on the subject in question have been omitted.

subject to the Food and Drugs Act; the quantity of the contents must be stated irrespective of whether the articles remain in the containers in which first packed.

The department is further of the opinion that you are correct in your interpretation of the law as set forth in the postscript of your letter, that the marking of boxes of apples to show merely the number of apples therein is not a sufficient marking for the purposes of the net-weight amendment.

Respectfully,

D. F. HOUSTON, *Secretary of Agriculture.*

62. Marking packages of citrus fruit under net-weight amendment.

DEAR SIR: In the enforcement of the net-weight amendment, this department is concerned with the quantity of the contents in a package and can not undertake to advise a manufacturer of containers as to the labeling thereof, inasmuch as the containers may be used for a wide variety of products and under conditions over which the manufacturer of the containers has no control.

The statement of the quantity of the contents in the case of citrus fruits may be expressed in terms of dry measure as provided by paragraph (e) of Food Inspection Decision 154. If the declaration is made in accordance with paragraph (g), the statement of the number of oranges, or other fruit, which a given crate or box contains must be qualified by a statement of the size of the fruit. This should be given in terms of the average diameter in inches, which it is believed may be easily determined by means of the "sizer" in accordance with the usual trade custom. A statement of the cubical capacity of a box as 3,456 cubic inches is not a statement of the quantity of the contents, neither is it in the terms of weight, measure, or numerical count as provided by the regulations.

Respectfully,

C. F. MARVIN, *Acting Secretary of Agriculture.*

63. Bottled-in-bond goods.

DEAR SIR: Replying to your inquiry relative to the statement of quantity on the "bottled-in-bond" stamp on whisky, you are informed that in the opinion of this bureau such marking is not a sufficient compliance with the amendment of March 3, 1913, to the Food and Drugs Act and regulations issued thereunder. The law and the regulations require that the statement of the quantity of the contents shall be plainly and conspicuously made. The statement of the quantity on "bottled-in-bond" stamps is not regarded as a plain and conspicuous statement within the meaning of the law and the regulations.

Respectfully,

C. L. ALSBERG, *Chief.*

64. The expression "No. $\frac{1}{2}$," referring to the size of cans, not considered misleading on shipping cases.

DEAR SIR: In reply to your inquiry whether the use of the statement "No. $\frac{1}{2}$ " on a shipping box which contains two dozen cans, each of which bears a true declaration of the quantity of the contents, is in conformity with the Food and Drugs Act as amended March 3, 1913, and the regulations thereunder, you are informed that the use of the statement "No. $\frac{1}{2}$ " will be permitted in the marking of outside shipping containers. This will not permit the use of the term " $\frac{1}{2}$ cans," which is considered misleading as indicated in a previous letter. See S. R. A., Chem. 6, p. 416, letter No. 45.

Respectfully,

C. L. ALSBERG, *Chief.*

65. Statement of contents on packages of prepared mustard.

DEAR SIR: It is permissible to label prepared mustard either in terms of weight or in terms of measure, in accordance with paragraph (f) of Food Inspection Decision 154.

Respectfully,

C. L. ALSBERG, *Chief.*

66. Recall of letter 36 in S. R. A., Chem. 5, p. 311.

DEAR SIR: The above-mentioned letter was in error in stating that drams are units of troy weight. "Dram" unqualified refers to a recognized subdivision (one sixteenth) of an avoirdupois ounce. A "fluid dram" is one eighth of a fluid ounce. The term "dram" is also used as an expression of apothecaries' weight, but such usage does not have the legal basis that is accorded the avoirdupois weight or the United States liquid measure.

The reply is hereby recalled, and the following should be substituted therefor:

DEAR SIR: The subject of your inquiry is covered by paragraph (d) of the regulations under the weight and volume amendment to the Food and Drugs Act (F. I. D. 154).

There would be no objection to the statement "5 fluid drams." However, a statement reading "15 fluid drams" is not in conformance with paragraph (d), inasmuch as 8 fluid drams constitute 1 fluid ounce. Please also note the exemptions for small packages given in paragraphs (j) and (k).

Respectfully,

C. L. ALSBERG, *Chief.*

67. Amendment to letter 25 in S. R. A., Chem. 3, p. 113.

DEAR SIR: Inasmuch as Food Inspection Decision 156 permits the correction of a wine deficient in saccharine matter by the addition of a pure dry sugar, our previous letter (S. R. A., Chem. 3, p. 113, letter 25) is hereby revoked so far as it is inconsistent with that decision.

Respectfully,

C. L. ALSBERG, *Chief.*

68. Pepper shells in ground pepper.

DEAR SIR: Your request for a ruling covering the use of pepper shells in ground pepper is hereby acknowledged.

The standards in Circular 19 state that ground pepper is the product made by grinding the entire berry and contains the several parts of the berry in their normal proportions. White pepper is the dried mature berry of *Piper nigrum* L. from which the outer coating or the outer and inner coatings have been removed, and contains not less than 6 per cent of extract, etc.

The sale as pepper of mixtures of pepper and ground pepper shells is clearly prohibited by the Food and Drugs Act. Section 7 of the act, subdivisions 1 and 2, under food, state that a food is adulterated: First, if any substance has been mixed and packed with it so as to reduce or lower or injuriously affect its quality or strength; second, if any substance has been substituted wholly or in part for the article.

Respectfully,

C. L. ALSBERG, *Chief.*

69. Use of the terms "sugar peas," "sugar corn," and "Champion peas."

DEAR SIR: Reference is made to your inquiry regarding the use of the terms "sugar peas," "sugar corn," and "Champion peas."

This matter has been discussed with the Bureau of Plant Industry, and as a result of the statements made by that bureau you are informed that the use of the terms "sugar corn" and "sugar peas," as applied to varieties which are distinctly sweet, is not regarded as objectionable. The terms "sweet corn" and "sugar corn" are used interchangeably, and the term "sugar peas" is used also for some of the higher grades of wrinkled peas which are used in canning. The term "sweet peas" would not be regarded as a synonym for "sugar peas," since the former term is confined exclusively in horticultural literature to the types of peas grown for their flowers. Sugar is customarily used in connection with the canning of both corn and peas for the purpose of sweetening the liquor, and it should be understood that the use of sugar in canning corn or peas does not justify the use of the terms "sweet corn," "sugar corn," and "sugar peas" for such products. As stated above, the use of these terms is only proper when the varieties are distinctly sweet. In this connection, the provisions of Food Inspection Decision 66 should be borne in mind.

It is the opinion of the bureau that the term "Champion" is objectionable in connection with the labeling of peas, since the use of this word would undoubtedly lead to confusion, owing to the fact that the word "Champion" is often used as a contraction for the name "Champion of England." This is a recognized horticultural name for a standard variety of peas. The use of the word "Champion" would only be regarded as proper in connection with peas belonging to the "Champion of England" variety.

Respectfully,

C. L. ALSBERG, *Chief.*

70. Labeling of "skimmed" and "part-skimmed" cheeses.

DEAR SIR: The bureau requires all skimmed or part-skimmed cheeses to be plainly labeled or branded with the words "skimmed" or "part-skimmed" upon the wrapper or container of each individual cheese, as well as upon the case in which a number of small cheeses are packed.

Skimmed or part-skimmed cheeses of a size commonly sold uncut to the consumer, and not inclosed in a wrapper or other individual container, must be branded or labeled, in accordance with the fact, on the rind of the cheese itself.

Large cheeses, skimmed or part-skimmed, which are not inclosed in a wrapper or other covering than the wooden drum or box, and which are commonly sold to the consumer in segments or slices and not as entire cheeses, need not have the brand or label on the cheese itself, but only on the drum or box. If, however, any circular or printed matter be inclosed with such cheese, it must bear in conspicuous type the words "skimmed" or "part-skimmed," in accordance with the fact.

Respectfully,

C. L. ALSBERG, *Chief.*

71. Notice to importers—The importation of fennel, coriander, cardamom, anise, and celery seed.

DEAR SIR: You are advised that it is the opinion of this bureau from the data available that fennel, coriander, cardamom, anise, and celery seed, respectively, should meet the following specifications:

Fennel should contain not less than 96 per cent of sound fennel seed, nor more than 9 per cent of ash.

Coriander should contain not less than 95 per cent of sound coriander seed, and not more than 7 per cent of ash.

Cardamom should contain not less than 64 per cent of sound cardamom seed and not more than 36 per cent of inert material, including the pods; ash of the whole fruit not to exceed 8 per cent.

Anise should contain not less than 97 per cent of sound anise seed and not more than 9 per cent of ash.

Celery seed should contain not less than 90 per cent of sound celery seed, and not more than 10 per cent of ash.

The above products must not contain fecal matter or anything of a harmful nature. Action at the ports of entry will be governed according to the above specifications.

Respectfully,

C. L. ALSBERG, *Chief*.

72. Poultry foods containing limestone or calcium phosphate.

DEAR SIR: The bureau has carefully considered the labeling of poultry foods which contain limestone or calcium phosphate present in the form of grit, and has reached the conclusion that both of these substances must be considered poultry foods.

While it is undoubtedly true that some of the poultry foods on the market contain much more calcium carbonate (limestone) or much more calcium phosphate than is necessary to supply the chickens' needs in building up tissues, it is not known how much of these constituents is used by the organism in building tissue and how much as a grinding material. Consequently it is impossible to limit the calcium carbonate or calcium phosphate to a particular figure and say that above this figure the constituents named no longer act as food materials.

In view of the above, no statement on the label relative to grit is required under the provisions of the Food and Drugs Act, in case the grit is composed of calcium carbonate or calcium phosphate, provided that such calcium carbonate or calcium phosphate is not present in excessive amount. It is understood, however, that under a number of the state laws the grit must be mentioned among the ingredients.

Relative to the labeling of poultry foods which contain charcoal or grit of a siliceous nature your attention is called to letter No. 8 in S. R. A., Chem. 1, p. 5.

Respectfully,

C. L. ALSBERG, *Chief*.

REPORT OF BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for July.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: July.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
July—			
Births -----	3,929	3,820	16.7
Deaths -----	2,907	3,108	12.4
Marriages -----	2,897	2,760	12.3
June—			
Births -----	3,737	3,759	16.5
Deaths -----	3,087	3,057	13.6
Marriages -----	3,485	3,371	15.3

The July totals were somewhat greater in 1914 than in 1913 for both births and marriages, while the monthly death total was considerably less this year than last.

Moreover, the birth registration exceeded the death total for July by no less than 1,022, or 35.2 per cent.

As to deaths, it may be noted that of the 2,907 decedents in July some 133, or 4.6 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together:

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

Birth, Death and Marriage Totals, for Principal Counties: July.

County	July, 1914		
	Births	Deaths	Marriages
California -----	3,929	2,907	2,897
Counties of more than 25,000 population (1910):			
Alameda -----	382	286	221
Butte -----	44	30	27
Contra Costa -----	38	32	22
Fresno -----	170	71	88
Humboldt -----	48	34	28
Kern -----	63	33	37
Los Angeles -----	1,088	704	700
Marin -----	29	39	63
Orange -----	39	28	114
Riverside -----	67	28	26
Sacramento -----	156	100	100
San Bernardino -----	79	87	70
San Diego -----	140	103	134
San Francisco -----	624	509	579
San Joaquin -----	78	66	66
San Mateo -----	30	21	31
Santa Barbara -----	33	27	25
Santa Clara -----	100	122	94
Santa Cruz -----	49	42	29
Solano -----	31	28	13
Sonoma -----	71	47	54
Tulare -----	74	37	27
Selected groups:			
San Francisco and other bay counties-----	1,103	887	916
Los Angeles and Orange counties-----	1,127	732	814

Birth and Death Totals, for Principal Cities: July.

City	July, 1914	
	Births	Deaths
Freeholders' charter cities-----	2,388	1,698
Cities of more than 15,000 population (1910):		
Alameda -----	48	31
Berkeley -----	57	33
Fresno -----	71	28
Long Beach -----	37	31
Los Angeles -----	648	440
Oakland -----	245	161
Pasadena -----	70	25
Riverside -----	30	17
Sacramento -----	121	90
San Diego -----	98	74
San Francisco -----	624	509
San Jose -----	31	39
Stockton -----	30	30
Selected groups:		
San Francisco -----	624	509
Oakland, Alameda and Berkeley-----	350	225
Total, bay cities-----	974	734
Los Angeles -----	648	440
Neighboring cities -----	142	76
Totals -----	790	516

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Months, for California: July.

Cause of death	Deaths: July	Proportion per 1,000	
		July	June
ALL CAUSES	2,907	1,000.0	1,000.0
Typhoid fever	45	15.5	8.7
Malarial fever	8	2.7	2.6
Measles	24	8.3	6.8
Scarlet fever	6	2.1	2.6
Whooping-cough	24	8.3	11.7
Diphtheria and croup	9	3.1	6.2
Influenza	4	1.4	1.3
Other epidemic diseases	12	4.1	2.6
Tuberculosis of lungs	357	122.8	127.0
Tuberculosis of other organs	56	19.3	21.7
Cancer	221	76.0	68.7
Other general diseases	111	38.2	43.1
Meningitis	30	10.3	8.7
Other diseases of nervous system	267	91.9	82.9
Diseases of circulatory system	454	156.2	165.5
Pneumonia and broncho-pneumonia	140	48.2	56.4
Other diseases of respiratory system	61	21.0	19.8
Diarrhea and enteritis, under 2 years	71	24.4	27.5
Diarrhea and enteritis, 2 years and over	36	12.4	13.9
Other diseases of digestive system	171	58.8	59.0
Bright's disease and nephritis	203	69.8	66.7
Childbirth	28	9.6	11.3
Diseases of early infancy	114	39.2	34.7
Suicide	74	25.4	27.2
Other violence	271	93.2	83.2
All other causes	110	37.8	40.2

In July there were 454 deaths, or 15.6 per cent of all, from diseases of the circulatory system and 413, or 14.2 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis considerably.

Other notable causes of deaths in July were: Violence, 345; diseases of the nervous system, 297; diseases of digestive system, 278; cancer, 221; Bright's disease and nephritis, 203; diseases of respiratory system, 201; and epidemic diseases, 132.

The deaths from epidemic diseases were as follows: Typhoid fever, 45; measles and whooping-cough, each 24; diphtheria and croup, 9; malarial fever, 8; scarlet fever, 6; and all other epidemic diseases, 16.

The deaths from the four leading epidemic diseases reported for the month were distributed by counties as follows:

Typhoid fever		Measles		Whooping-cough	
Alameda	2	Alameda	12	Alameda	3
Butte	1	Contra Costa	3	Contra Costa	1
Calaveras	1	Humboldt	1	Fresno	1
Contra Costa	2	Los Angeles	2	Los Angeles	3
Fresno	2	Sacramento	1	Merced	1
Imperial	2	San Francisco	3	Riverside	1
Kings	1	Stanislaus	2	Sacramento	2
Lassen	1	Total	24	San Bernardino	1
Los Angeles	8			San Francisco	3
Mariposa	1	Diphtheria and croup		San Luis Obispo	1
Riverside	1	Alameda	3	Santa Barbara	1
Sacramento	4	Butte	1	Santa Clara	1
San Bernardino	2	Humboldt	1	Shasta	1
San Diego	1	Los Angeles	1	Siskiyou	1
San Francisco	3	San Francisco	3	Stanislaus	1
San Joaquin	5	Total	9	Tulare	1
Santa Clara	2			Ventura	1
Sonoma	1			Total	24
Stanislaus	1				
Tehama	1				
Ventura	1				
Yolo	1				
Yuba	1				
Total	45				

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: July.

Geographic division	Deaths: July										
	All causes -----	Epidemic diseases -----	Tuberculosis (all forms) -----	Cancer -----	Diseases of nervous sys- tem -----	Diseases of circulatory system -----	Diseases of respiratory system -----	Diseases of di- gestive system -----	Bright's disease and nephritis -----	Violence -----	All other causes -----
THE STATE -----	2,907	132	413	221	297	454	201	278	203	345	363
Northern California -----	327	15	40	20	33	49	17	28	19	56	50
Coast counties -----	168	4	23	10	17	24	11	10	10	28	31
Interior counties -----	159	11	17	10	16	25	6	18	9	28	19
Central California -----	1,553	87	183	127	150	266	109	163	122	155	191
San Francisco -----	509	17	62	60	35	101	40	55	41	40	58
Other bay counties ---	378	32	37	21	40	78	33	27	28	29	53
Coast counties -----	221	5	30	19	31	28	14	31	16	23	24
Interior counties -----	445	33	54	27	44	59	22	50	37	63	56
Southern California -----	1,027	30	190	74	114	139	75	87	62	134	122
Los Angeles -----	704	19	140	51	67	94	57	63	48	73	92
Other counties -----	323	11	50	23	47	45	18	24	14	61	30
Northern and Central California -----	1,880	102	223	147	183	315	126	191	141	211	241
Metropolitan area ----	887	49	99	81	75	179	73	82	69	69	111
Rural counties -----	993	53	124	66	108	136	53	109	72	142	130

Sex, Race and Nativity.—The proportion of the sexes among the 2,907 decedents in July was: Male, 1,763, or 60.6 per cent; and female, 1,144, or 39.4 per cent.

The race distribution of decedents was: White, 2,754, or 94.7 per cent; Chinese, 50; negro, 49; Japanese, 39; and Indian, 15.

The 2,754 white decedents were classified by nativity as follows: California, 783, or 28.4 per cent; other states, 1,034, or 37.6 per cent; foreign countries, 865, or 31.4 per cent; and unknown, 72, or 2.6 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: July.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
ALL AGES -----	2,907	1,763	1,144	100.0	100.0	100.0
Under 1 year-----	306	164	142	10.5	9.3	12.4
1 to 4 years-----	137	76	61	4.7	4.3	5.3
5 to 9 years-----	48	31	17	1.6	1.8	1.5
10 to 19 years-----	112	66	46	3.9	3.7	4.0
20 to 29 years-----	281	181	100	9.7	10.3	8.8
30 to 39 years-----	309	183	126	10.6	10.4	11.0
40 to 49 years-----	357	223	134	12.3	12.6	11.7
50 to 59 years-----	376	236	140	12.9	13.4	12.3
60 to 69 years-----	366	218	148	12.6	12.4	12.9
70 years and over-----	615	385	230	21.2	21.8	20.1

This table shows that relatively more females than males died at under 1 year, 1 to 4 years, 10 to 19 years, 30 to 39 years, and 60 to 69 years, while relatively more males than females died at 5 to 9 years, 20 to 29 years, 40 to 59 years, and at 70 years and over. In general, the proportion of female decedents exceeded that of males at the age periods under 20 years, while the proportion of male decedents surpassed that of females at the age periods of 20 years and over.

Length of Residence.—The table below gives the number and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: July.

Length of residence	Deaths	Per cent
Total -----	2,907	100.0
Under 1 year-----	133	4.6
1 to 9 years-----	600	20.6
10 years and over-----	1,082	37.2
Life -----	831	28.6
Unknown -----	261	9.0

It appears from this table that 4.6 per cent of all decedents had resided in California less than one year, and altogether 25.2 per cent had lived in the State under ten years. Residents of ten years' standing comprised 37.2 per cent of all decedents, and native Californians who had been here for life comprised 28.6 per cent, the length of residence being unknown for 9.0 per cent of all decedents.

MORBIDITY REPORTS.

Smallpox.

During August there were 44 cases of smallpox reported from nine counties of the State. Most of these cases occurred in Humboldt County and in Los Angeles County, the other cases being scattered. A number of unrecognized cases had existed in Ferndale during the summer and an investigation in Humboldt County revealed the fact that there had been a number of cases in Eureka that had been diagnosed as chickenpox by the attending physicians. It is presumed that these cases had their origin in the outbreak which occurred in Mendocino County several months ago. Of the 44 cases, one half of them had never been vaccinated and vaccination histories were not obtained for 20 cases. Two of the patients had been vaccinated more than seven years preceding the attack.

Typhoid Fever.

According to precedence, typhoid fever showed a marked increase during August, there being a total of 211 cases reported. Seventy of these cases occurred in Healdsburg, where Dr. W. A. Sawyer, director of the State Hygienic Laboratory, conducted an examination, determining the source of infection to be in the city water supply. This supply comes from shallow wells sunk in the gravel in the bed of the Russian River, which stream is polluted with sewage from many summer resorts. Twenty-four cases were reported in Sacramento during the month, the water supply being undoubtedly responsible for most of these cases.

Chickenpox.

Sixty-two cases were reported during August as against 76 for July.

Epidemic Cerebrospinal Meningitis.

Not a single case of this disease was reported during the month, which is a record that has not been approached for over a year.

Tetanus.

Two cases of tetanus were reported during August.

Gonococcus Infection.

There were 52 cases reported, which is an increase over July, when 33 cases were reported. Physicians are beginning to report cases of venereal disease more thoroughly than in the past.

Syphilis.

Thirty-four cases of this disease were reported, which is about the number in reports that have been received each month for some time past.

Diphtheria.

The number of cases of diphtheria continues to decrease, there being but 107 cases reported during August.

Scarlet Fever.

Scarlet fever is also on the decrease. Ninety-five cases were reported during August against 140 cases in July.

Pneumonia.

Sixty-two cases, the average number reported every month, occurred during August.

Poliomyelitis.

Ten cases were reported. Three of these were in San Francisco, two in Alameda, and one each in Oakland, Los Angeles, Riverside, Arroyo Grande, and Porterville.

Tuberculosis.

Four hundred and five cases of tuberculosis were reported during the month. Many of these were cases that were reported by health officers in small towns, who have not been in the habit of supplying such reports.

Whooping-cough.

Ninety-five cases were reported during August, which number is much lower than for the winter months.

Measles.

Measles shows a marked decrease during August, but 385 cases having been reported. This disease, like chickenpox and whooping-cough, is at its ebb during the summer months.

Smallpox.*Distribution of Cases reported during August, 1914.*

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vaccinated more than seven years preceding attack	Number never successfully vaccinated	Vaccination history not obtained or uncertain
Alameda County -----	1	-----	-----	-----	-----	1
Humboldt County -----	1	-----	-----	-----	-----	1
Eureka -----	14	-----	-----	-----	4	10
Ferndale -----	1	-----	-----	1	-----	-----
Imperial County -----	2	-----	-----	-----	2	-----
Calexico -----	1	-----	-----	-----	1	-----
Holtville -----	1	-----	-----	-----	-----	1
Los Angeles County -----	9	-----	-----	-----	6	3
Los Angeles -----	2	-----	-----	1	-----	1
San Gabriel -----	7	-----	-----	-----	7	-----
Sacramento County -----	-----	-----	-----	-----	-----	-----
Sacramento -----	1	-----	-----	-----	1	-----
Santa Barbara County -----	-----	-----	-----	-----	-----	-----
Santa Barbara -----	1	-----	-----	-----	1	-----
Santa Clara County -----	-----	-----	-----	-----	-----	-----
San Jose -----	1	-----	-----	-----	-----	1
Tehama County -----	-----	-----	-----	-----	-----	-----
Red Bluff -----	1	-----	-----	-----	-----	1
Siskiyou County -----	1	-----	-----	-----	-----	1
Totals -----	44	-----	-----	2	22	20

Typhoid Fever.

Distribution of Cases reported during August, 1914.

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----	1	Riverside County -----	
Alameda -----	1	Riverside -----	1
Oakland -----	9	Sacramento County -----	
Amador County -----		Sacramento -----	24
Sutter Creek -----	3	San Bernardino County -----	3
Butte County -----	1	Ontario -----	1
Contra Costa County -----		San Francisco -----	13
Martinez -----	3	San Joaquin County -----	
Fresno County -----	3	Stockton -----	1
Fresno -----	2	San Luis Obispo County -----	2
Humboldt County -----		San Mateo County -----	
Eureka -----	1	San Mateo -----	1
Ferndale -----	1	Santa Barbara County -----	
Imperial County -----	3	Santa Maria -----	1
El Centro -----	3	Santa Clara County -----	1
Lake County -----	1	San Jose -----	2
Lassen County -----	1	Santa Cruz County -----	2
Los Angeles County -----	1	Sonoma County -----	3
El Monte -----	1	Cloverdale -----	1
Long Beach -----	3	Healdsburg -----	70
Los Angeles -----	13	Santa Rosa -----	7
Watts -----	1	Stanislaus County -----	1
Mariposa County -----	1	Tehama County -----	
Modoc County -----	1	Red Bluff -----	1
Monterey County -----	1	Tulare County -----	4
Nevada County -----		Ventura County -----	
Nevada City -----	1	Oxnard -----	1
Orange County -----	3	Yolo County -----	1
Newport Beach -----	5	Woodland -----	2
Santa Ana -----	2	Yuba County -----	
Plumas County -----	1	Marysville -----	1
		Total -----	211

Poliomyelitis (Infantile Paralysis).

Distribution of Cases reported during August, 1914.

Counties and cities	Number of new cases reported during month
Alameda County -----	
Alameda -----	2
Oakland -----	1
Los Angeles County -----	
Los Angeles -----	1
Riverside County -----	
Riverside -----	1
San Francisco -----	3
San Luis Obispo County -----	
Arroyo Grande -----	1
Tulare County -----	
Porterville -----	1
Total -----	10

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.

Reported during August, 1914.

Disease	Total number of new cases reported during the month in the entire State
Scarlet fever -----	95
Measles -----	385
Diphtheria -----	107
Chickenpox -----	62
German measles -----	2
Gonococcus infection -----	52
Leprosy -----	2
Malaria -----	70
Mumps -----	12
Pneumonia -----	62
Syphilis -----	34
Tetanus -----	2
Tuberculosis -----	405
Whooping-cough -----	97

A TYPHOID INFECTION CONTRACTED IN THE LABORATORY.

By W. A. SAWYER, Director of the Bureau of the Hygienic Laboratory.

On June 15, 1914, an assistant in the State Hygienic Laboratory reported that she had on that day accidentally drawn a small amount of typhoid culture into her mouth while manufacturing sensitized typhoid vaccine. While removing the washings from agar cultures in Blake flasks she drew air into the pipette and pulled a small amount of the fluid through the cotton plug into her mouth. The amount of fluid was small, but she felt it on her teeth and the tip of her tongue. She washed out her mouth at once with 50 per cent alcohol, and repeated the operation several times.

The assistant had not been vaccinated against typhoid fever, but it had been her intention to be vaccinated with the material which she was manufacturing at the time of her accident.

The culture was from the Olsen strain isolated from the feces of a typhoid carrier on March 3, 1912, and cultivated on agar slants, being transferred at least monthly, for a period of 2½ years. Sometimes beef extract and sometimes fresh beef infusion was used in making the agar. Beef infusion was used in making all the later media.

On June 24th, in the morning, she began to have headache. She felt better the next morning, but in the afternoon the headache returned with greater severity and in the following night she had pain in her back and extremities and was chilly. On June 26th she came to the laboratory. Blood was taken for a culture and for the Widal test. Both were negative. Her temperature reached 102.8° F. in the afternoon. A tentative diagnosis of typhoid fever was made, and she was sent home with advice to call her family physician at once, and not to return to work until well. She took to her bed and called her physician, Dr. John W. Williamson of San Francisco. He saw her the same evening and took charge of her case.

On July 3d her temperature became normal. On July 7th she was allowed to leave her bed and sit up. Her highest temperature had been 103.2° F.

On July 8th a specimen of her blood was taken and sent to the State Hygienic Laboratory. Positive results were obtained when the blood was submitted to the Widal test. On July 11th she went to the San Francisco Health Department. Dr. Walker took blood for the Widal test and found the results positive.

On July 17th Dr. Williamson gave his permission to return to duty for part time until she had regained her strength fully. On July 20th she returned to duty at the State Hygienic Laboratory. She was offered her regular vacation to begin at that time, but she felt well and expressed a desire to have her vacation later in the year as originally planned.

On July 22d blanks were filled out for the Industrial Accident Commission, as it seemed just to regard her infection as an accident incidental to her employment.

On July 24th her feces and urine were examined by plating on Endo medium. No typhoid bacilli were present.

The case shows that cultivation on artificial media for 2½ years does not necessarily remove the virulence of the typhoid bacillus.

OCTOBER BULLETIN.

REPORT OF THE BUREAU OF ADMINISTRATION.

JOHN F. LEINEN, Director.

Report of field operations jointly with the United States Public Health Service.

Senate Bill No. 160, passed by the California legislature and approved by the Governor of California, June 7, 1913, became effective August 10, 1913. The State Board of Health passed the following resolution, under date of August 20, 1913:

WHEREAS, There has been found within the territory comprised in the counties of Contra Costa, Alameda, Santa Clara, Santa Cruz, Monterey, San Benito, Merced, Stanislaus and San Joaquin, of the State of California, a total of one thousand eight hundred and forty-three (1,843) ground squirrels (*Citellus Beecheyi*) which have been proven by laboratory investigation to have been infected with a contagious and infectious disease, to wit, bubonic plague; and

WHEREAS, An act of the legislature of the State of California, approved June 7, 1913, provides: "Whenever any land, place, building, structure, wharf, pier, dock, vessel or water craft is infested with rodents, insects or other vermin which are liable to convey or spread contagious or infectious disease from an existing focus declared by the State Board of Health, it shall be the duty of said Board to at once notify the person, firm, copartnership, company or corporation, owning said land, place, building, structure, wharf, pier, dock, vessel or water craft, of the existence of said rodents, insects or other vermin and said notice shall direct said owner to proceed immediately to exterminate and destroy said rodents, insects or other vermin, and to continue in good faith such measures as may be necessary to prevent their return. In the event that said owner fails, refuses or neglects to proceed as above provided, within ten days from date of receipt of said notice, the State Board of Health may at once proceed to exterminate and destroy said rodents, insects or other vermin, and take such measures as may be necessary to prevent their return, and the cost of the above measures shall be repaid to the State Board of Health by the board of supervisors or other governing body of the county, city and county, city or town wherein the work is done at its next meeting after the bill is presented and the appropriation provided in section 1 of this act shall be reimbursed by the amount so paid, and may again be expended in a similar manner; therefore, be it

Resolved. That the territory comprised within the aforesaid counties is hereby declared to be an existing focus of contagious and infectious disease; and be it further

Resolved, That the Secretary of this Board be directed to notify the supervisors of the above named counties of the passage of this resolution, and of the intention of the State Board of Health to proceed in accordance with the provisions of the act of the state legislature, approved June 7, 1913.

As soon as this resolution became effective, the following plan of operation was placed in effect:

1. All the counties mentioned in the resolution were divided into districts of approximately forty thousand acres each.

2. Each county was placed under the direction of a supervising inspector, responsible to headquarters; each forty thousand acre district was placed under the charge of a field inspector, responsible to the supervising inspector.

3. The field inspectors were directed to serve notices, as provided by law, upon the owners of infested lands.

4. At the expiration of ten days, the field inspector reinspected the property, to determine whether eradication measures had been instituted by the owner. If measures of eradication had not been instituted by the owner, as the law required, the field inspector requested the owner of the land to state a definite date, as early as possible, when he would begin work.

5. If the work of squirrel destruction had not been instituted on or before the date agreed upon, the field inspector reported the facts to the supervising inspector. The supervising inspector then collected such data as was necessary for the information of the officer in charge, and forwarded the same to headquarters with a request for instructions.

6. When the report above mentioned was received at headquarters, the supervising inspector was either directed to go upon the land as soon as possible and destroy the squirrels that infested the same, or a force of state employees was directed by headquarters to proceed upon the land and do the work. When the work was completed, a statement of the expense incurred was submitted to the owner, and he was given an opportunity to pay the same, if he so desired. If the bill was not paid, as presented, the same was forwarded to the State Board of Health to be collected in the manner provided by the act of the California legislature, approved June 7, 1914.

It became necessary during the fiscal year to proceed upon the lands of fifty-three persons, comprising a total of 11,300 acres. An idea of the cooperation obtained from individuals in the destruction of squirrels may be gathered from the fact that out of a total of 33,350 inspections of ranches made during the fiscal year, only 53 ranches had to be proceeded upon in a summary manner, as provided by law.

Inspection Operations.

During the year inspection of land and serving of notices has been carried on as outlined earlier in this report. Operations have been conducted in the following counties: Contra Costa, San Benito, Santa Clara, Merced, Stanislaus, Alameda, San Joaquin, Santa Cruz, and Monterey. A total of 33,350 inspections over an area of 5,722,438 acres has been made during the year. Reinspections have been made over 6,903,307 acres, and a total of 1,909,728 acres has been treated by landowners as a result of the inspections made and notices served.

Hunting Operations.

Total number of ranches on which plague infected squirrels have been found since August, 1908, 252; total number of ranches hunted over during fiscal year, 2,525.

Squirrels shot	18,012
Squirrels found dead	414
Total	18,426
Squirrels examined	18,322
Squirrels infected with plague	177

At the close of the fiscal year ended June 30, 1913, there were 135,146 acres of known infected land. During the fiscal year infection was found on 15,005 acres of land where infection had never before existed. The total area of infected land June 30, 1914, 150,151 acres. In addition to the 150,151 acres of infected land just mentioned, there were 90,405 acres of land which immediately surrounded or adjoined the infected land, which were subjected to the same intensive treatment that was given to the actually infected territory. The total area of infected and adjoining lands is therefore 240,556 acres.

All of the infected and adjoining land has been thoroughly treated, and so far as is possible to determine, it is believed that plague infection has been entirely eradicated, except on about 20,000 acres which require

further treatment to complete the eradication of infection. This land is now being worked and it is believed that squirrels will have been practically eradicated, and all known infection wiped out, by the first of August, 1914.

Summary of hunting operations for the period, April 1 to July 1, 1912, 1913 and 1914.

	1912	1913	1914
Ranches hunted over -----	723	990	1,464
Total number squirrels shot -----	19,335	16,186	13,162
Hunters engaged (average) -----	9	17	21
Average days each man hunted -----	64.4	49.4	57.2
Squirrels per hunter per day -----	33.3	19.2	10.5
Squirrels shot per ranch -----	26.7	16.3	8.5
Infected squirrels shot during period -----	506	283	44
Per cent of squirrels infected -----	2.61	1.74	.34

Hunting operations over infected and adjoining territory are practically completed.

The forty-four squirrels mentioned in the preceding table were found as follows:

County	Ranch	Infected squirrels	Completed or working
San Benito -----	McCray -----	2	Completed
San Benito -----	Paicines -----	7	Working
Monterey -----	Kelley -----	1	Completed
Contra Costa -----	Vasco Grant -----	5	Working
Contra Costa -----	Crocker -----	1	Working
Contra Costa -----	Walnut Creek district	17	Working
(Small lots—area 714 acres.)			
Alameda -----	Fredericks -----	11	Working

Of the forty-four infected squirrels shot during the hunting season of 1914, only two had the disease in the septicæmic form. These two squirrels were found as follows:

One on the McCray Ranch in San Benito County.

One on the Vasco Grant in Contra Costa County.

As may be seen from the summary of hunting operations above given, there has been a reduction in the number of squirrels shot per hunter per day in 1914, as compared to the same period in 1912, of 68.5 per cent; as compared to 1913, there has been a reduction of 45.3 per cent. The reduction in the number of squirrels shot per ranch in 1914, as compared to 1912, is 68.2 per cent, and as compared to 1913 is 47.9 per cent. The reduction of infection in 1914 as compared to 1912 is 91.4 per cent; as compared to 1913, is 84.5 per cent.

Human Cases.

Two human cases of plague occurred during the fiscal year. One case was that of a cook in a railroad camp in Contra Costa County. The disease was bubonic in type and resulted fatally. The other case occurred at Walnut Creek, in Contra Costa County, was mild bubonic in type, atypical in course, and the patient made a prompt recovery.

Special Projects.

During the latter part of the fiscal year ended June 30, 1913, it developed that many landowners were more inclined to proceed with the eradication of squirrels from their lands if expert supervision could be provided—as past experience had indicated to them that good and permanent results, at a low cost, could not be obtained by the methods that had been followed out in the past. After a number of requests of this character had been received, the plan was adopted of providing an expert foreman to supervise the work on any tract of land where the owner would furnish adequate labor, and material sufficient to complete the work of squirrel destruction in a manner satisfactory to the service. During the fiscal year 107 requests for supervision were received and as a result 625,154 acres were freed from squirrels. In every instance complete satisfaction was expressed by the landowners with the results that had been obtained, and the statement was made that a sufficient number of men would be kept at the work of squirrel extermination to prevent reinfestation of the lands that had been cleaned, by squirrels that infested adjoining territory.

General Considerations.

The operations of Senate Bill No. 160, passed by the California legislature and approved by the Governor June 7, 1913, have been very satisfactory. But little opposition has been encountered, and in no instance have legal measures been resorted to by any individual to evade compliance with the law. In several instances intimations were received that a strong desire existed to test the constitutionality of the law, but by careful handling and the exercise of some patience, these landowners were finally induced to comply with the requirements of the law without resorting to legal measures. These individuals have since expressed themselves as entirely satisfied with the work as carried out, and in several instances they have exerted themselves to induce others to comply promptly and consistently, with uniformly good results.

The belief that had heretofore existed throughout the state, that the problem of squirrel destruction was impossible of solution, is gradually losing ground, and representatives of counties in which plague infection has never been found have requested this office to lend assistance in the organization of a campaign of squirrel destruction within said counties. Inasmuch as plague infection had never been demonstrated within these counties, it was impossible to comply with the requests beyond giving such general advice as seemed appropriate. Landowners generally have begun to appreciate, as never before, the economic benefits that are accruing, and will accrue, to them as the result of the destruction of the squirrels which had heretofore infested their properties and caused them great losses each year, due to the destructive tendencies of these rodents; and numbers of individuals have expressed their determination to carry on the work of squirrel destruction to final completion in order to protect the investment that has already been made in work of this character.

As nearly as can be learned, about fifteen hundred squirrel destructors have been used by the various agencies engaged in squirrel destruction. A total of 402,280 acres of land have been treated by this means with, as nearly as can be determined, an average efficiency of from 95 per cent to 100 per cent for the first application.



During the year a new method of using waste balls in the destruction of ground squirrels has been devised. Heretofore the expense attached to the use of the waste ball method has been between three and three quarters and five cents per hole, for labor and material. As a result of the system in use during the past rainy season the expense per hole has been reduced to about two cents for labor and material. The system in use is, briefly, as follows:

A unit gang of seven laborers was required. A live, active man was selected to place the balls in the holes. He was kept supplied with a bucket of saturated waste balls and a bundle of galvanized iron pins with a white flag attached, similar to the pins used by engineers. The "ball man" placed a ball in each hole encountered and placed a pin close to it. Two "torch men" followed, igniting the balls. Three men with mattocks followed the torch men, covered the holes, and removed the pins. A supply man was utilized to keep the ball man supplied with material, that no time be lost. Where sufficient labor was available, one supply man could keep two gangs of six moving constantly, thus obviating the necessity for the services of one supply man. By this means, in heavy infestation, four hundred to five hundred holes per man per day have been treated. The average for all infestation runs in the neighborhood of two hundred to three hundred holes per man per day, depending upon the topography of the ground. The efficiency of the method has run between 85 per cent and 95 per cent. The principal advantage of this method is that the ground can be rapidly covered and all burrows and colonies are filled with poisonous fumes in a very short space of time, thus insuring the destruction of the majority of the squirrels before they are able to dig out and escape. This method, however, is applicable only in the wet season when the ground is damp, and there is no danger of the dissipation of the gas through cracks in the ground or danger of starting grass or grain fires where dry vegetation exists. A total of 503,125 acres were treated by this method.

The following table will show the results of operations as reported by field inspectors and supervising inspectors from the various counties. This table was compiled from the daily report cards of the various inspectors and has been verified as nearly as possible by surveys made from time to time by representatives from headquarters. It is believed that the figure of 73.8 per cent eradicated is as nearly accurate as it is possible to obtain.

Table showing infestation in plague infected counties in California, to June 30, 1914.
RECAPITULATION.

Counties	Total area (acres)	Area eradicated (acres)	Percentage eradicated	Area squirrels 1 to 5 (acres)	Percentage eradicated and 1 to 5 (acres)	Area squirrels 5 to 15 (acres)	Area squirrels 15 and over (acres)
Alameda	537,600	425,253	79.1	103,405	98.3	7,306	1,636
Contra Costa ..	480,000	435,568	90.7	34,742	97.9	9,690	-----
Merced	1,120,000	507,768	45.3	606,896	99.5	5,336	-----
Monterey	2,208,000	1,999,512	90.5	181,379	98.7	26,244	865
San Benito	944,640	753,346	79.7	177,260	98.5	13,510	524
Santa Clara ..	867,200	769,709	88.7	72,980	97.1	5,140	19,371
Santa Cruz ..	272,000	255,236	93.8	16,414	99.8	350	-----
San Joaquin ..	876,800	771,272	87.9	102,428	99.6	3,200	-----
Stanislaus	951,040	183,861	19.3	438,000	65.3	184,539	144,640
Totals	8,257,280	6,101,525	73.8	1,733,504	94.8	256,315	167,036

Average eradicated 73.8 per cent
Average eradicated and 1 to 5 94.8 per cent

The following table summarizes the total amount of lands treated, the number of acres treated by the various methods, and indicates the cost of all operations, as closely as the same can be figured:

Recapitulation of squirrel eradication work 1913-1914. Number of acres worked.

	Grain	Waste balls	Destructors	Total
By individuals -----	1,251,836	398,569	251,323	1,901,728
Federal camp -----	3,521	-----	8,220	11,741
*Special projects -----	386,270	99,940	138,944	625,154
State camps -----	2,891	4,616	3,793	11,300
Grand total -----	-----	-----	-----	2,549,923

(*Labor and material furnished by owners, supervision by service.)

Total number of acres treated, waste ball and destructors, 905,405.

Number of holes treated.

Waste ball and destructors:

By individuals -----	3,176,206
Federal camp -----	244,295
Special projects -----	1,894,174
State camps -----	241,653
Total -----	5,556,328
Average number of holes per acre -----	6.15
Total number of holes on 2,549,923 acres, at 6.15 holes per acre -----	15,650,000

Cost data.

By individuals:

	Number of pounds used	Cost	Cost of labor	Total cost
Grain -----	472,123	\$35,409.22	\$145,694.25	\$181,103.47
CS ₂ -----	182,220	16,399.80	10,496.00	26,895.80
Kilmol -----	147,570	16,232.70	11,189.80	27,422.50
Total -----	-----	-----	-----	\$235,421.77

Special projects:

	Number of pounds used	Cost	Cost of labor	Total cost
Grain -----	125,231	\$9,392.32	-----	-----
CS ₂ -----	117,740	10,596.60	-----	-----
Kilmol -----	81,060	8,916.60	-----	-----
Totals -----	-----	\$28,905.52	\$29,486.44	\$58,391.96

Federal:

Headquarters—		
Salaries -----	\$9,929.49	
Rentals -----	1,325.78	
		\$11,255.27
Field—		
Salaries -----	79,449.69	
Livery -----	2,618.00	
Supplies -----	1,476.95	
Freight and travel -----	210.00	
		83,754.64
State -----		35,866.80
Counties -----		19,157.32
Oakland (one man) -----		1,640.00
Cost of material and labor (individuals) -----		235,421.77
Cost of material and labor (special projects) -----		58,391.96
Total cost -----		\$445,487.76
Average cost per acre -----		\$0.174
Average cost per hole -----		0.0284

Summary of hunting operations for the month of July, 1912, 1913, 1914.

	1912	1913	1914
Ranches hunted over -----	344	244	399
Total number squirrels shot -----	4,544	2,811	4,761
Hunters engaged -----	12	11	17
Average days each man hunted -----	19	15.5	18
Squirrels per hunter per day -----	20—	16+	15.5
Squirrels shot per ranch -----	13+	11.5	11.9
Infected squirrels shot during month -----	357	115	16
Percentage of squirrels infected -----	7.8%	4%	.33%

The sixteen infected squirrels shot in July, 1914, were found as follows:

County	Ranch	Number infected squirrels	Completed or working
Alameda -----	Fredericks -----	6	Completed
Alameda -----	Sullivan (immediately adjoins Fredericks ranch) -----	1	Working
Contra Costa -----	Walnut Creek district -----	8	Working
San Benito -----	Paicines -----	1	Completed

REPORT OF THE BUREAU OF TUBERCULOSIS FOR SEPTEMBER, 1914.

BURT F. HOWARD, M.D., Director.

The month of September makes the beginning of the second year of this Bureau, and since the Biennial report prepared this month, covers but ten months of this period, a brief note as to the success of the work of registration seems appropriate here.

During the year September 1, 1913, to August 31, 1914, inclusive, there were 4,937 cases of tuberculosis reported with names and addresses. The greater part of these were presumably pulmonary, as is indicated by that portion of the returns made on the new standard tuberculosis report cards. Compared with the number of cases of pulmonary tuberculosis reported during 1913, which was 4,536, or even with the total number of deaths from tuberculosis, which was 5,402, this is very gratifying as it shows that there is a tendency to appreciate the im-

portance of the collection of statistics as to the existence and distribution of tuberculosis.

The work of inspection, so far as completed, may be regarded as an estimate of the forces now available within the state for combating tuberculosis.

There are a number of county hospitals offering excellent accommodations for tuberculous cases and many private charities which play an important part in the education of the public toward a proper understanding of the control of this disease, while at the same time they are actively relieving distress and preventing infection.

Other county hospitals are less satisfactory and need to have ideals suggested and a spirit of emulation established.

There are about 1,800 beds available in the state for hospital care of the tuberculous, including beds reserved in federal and state institutions.

Special Data on Cases of Tuberculosis Reported during August, 1914.

Total number cases	213	Race or color:	
Under 5 years	1	White	187
5 to 14 years	5	Negro	---
15 to 24 years	52	Indian	3
25 to 34 years	63	Chinese	2
35 to 44 years	35	Japanese	3
45 years and over	45	Unknown	18
Unknown	12	Length of residence in California:	
Male	130	Under 1 year	20
Female	80	1 year	8
Unknown	3	2 years	13
Single	96	3 years	11
Married	85	4 years	13
Widowed, separated or divorced	11	5 years	15
Unknown	21	6 years	9
Dwelling:		7 years	5
Detached	101	8 years	3
Flat	12	9 years	7
Tenement	3	10 years	7
Boarding	7	10 to 20 years	34
Hotel	12	Over 20 years	52
Hospital	47	Unknown	16
Others	11	Number of persons in family:	
Unknown	26	Families of 1	15
Housing:		Families of 2	30
Good	110	Families of 3	40
Fair	45	Families of 4 to 15	65
Poor	13	(Average, 5.)	
Unknown	45	Tuberculosis in family:	
Financial condition:		Father	10
Independent	46	Mother	17
Wage earner	88	Sister	19
Indigent	34	Brother	26
Unknown	45	Husband	3
Occupational condition:		Wife	2
Good	67	Children	7
Fair	26	Others	9
Poor	10	Bacteriological examination:	
Unknown	110	T. B. positive	130
Nativity:		T. B. negative	10
California	60	Not stated	73
Elsewhere in United States	91	Prognosis:	
Foreign	53	Good	61
Unknown	9	Bad	67
		Doubtful	23
		Not stated	62
		Type:	
		Lungs	197
		Other organs	34

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR SEPTEMBER, 1914.

ANNA C. JAMME, Director.

Application for the certificate as registered nurse without examination, under section 8, of chapter 319, Statutes of 1913, became effective after July 1, 1914. According to this section of the law, applicants who hold a certificate of registration issued by another state or foreign country, may be registered without examination, if the requirements of the other state or foreign country are equal to the requirements of this state, namely, a three-year course and a general training in a hospital or hospitals. In the opinion of the attorney of the Board of Health, the applicant must testify that he or she, is, or intends to become, in good faith, a resident of this state, before a certificate will be issued.

The following states have in their laws requirements equal to those of California:

Delaware
Georgia
Idaho
Illinois
Indiana
Maryland

Minnesota
North Carolina
Rhode Island
Tennessee
Texas
Wisconsin

It is unlawful for a nurse who does not hold a certificate issued by the State Board of Health, to call herself a registered nurse, or use the letters R. N. after her name, or to personate in any way that she is a registered nurse.

The first examination will be held, at Sacramento, on December 5th. In accordance with the provisions of the act, public notice will be given by publishing the same in two papers of general circulation and in one nursing journal. Graduates of accredited training schools for nurses, either in California, or in other states will be eligible for this examination.

The following are the subjects for examination:

Anatomy and physiology
Hygiene
Bacteriology
Materia medica
Dietetics
Urinalysis

Children's diseases
Contagious diseases
Medical nursing
Surgical nursing
Obstetrical nursing
Ethics

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR SEPTEMBER, 1914.

WILBUR A. SAWYER, M.D., Director.

J. C. GEIGER, M.D., Chief Bacteriologist.

The Development of the Laboratory.

During the biennial period ending June 30, 1914, the number of routine bacteriological examinations performed at the State Hygienic Laboratory in the interest of the public health was 7,512. This showed an increase of 75 per cent over the total number for the previous biennial period. The more expensive and time-consuming examinations increased in number at a still faster rate. For instance, the number of examinations of drinking water for pollution was doubled, and over three times as many heads of animals were examined for evidence of rabies.

The increase in the quantity of work, while it shows a greater appreciation of the services of the laboratory by local health officials and physicians, does not represent the progress in the adaptation of the laboratory to the needs of the state so much as do the new functions. Recently, by the performance of free Wasserman tests at the State Hygienic Laboratory, syphilis was at last recognized as a very important preventable disease. Recognizing that the provisions for the control of typhoid fever are at present inadequate to give reasonable protection to a large part of the citizens of the state, the manufacture and free distribution of typhoid vaccine was instituted, so that the individual can, to a certain extent, make up for the failure of protection by the organized public.

Although the work of the Bureau has developed, it still falls far short of its proper variety and amount. The lack of workers in the field along lines of epidemiology and sanitary engineering greatly hampers the laboratory work in communicable diseases and water pollution, and renders much of the work unsatisfactory. The majority of the local health officials have insufficient time and not enough special training in public health to act helpfully as our local representatives. Until health officers are full-time public servants with special training, we can not expect a marked decrease in preventable disease, but the state can do a great deal through maintaining marked efficiency and high scientific standards in the laboratories and field forces of this bureau.

Government License No. 40.

At the request of the director of the laboratory, officers of the United States Public Health Service recently inspected the equipment of the laboratory in Berkeley and took up samples of antirabic vaccine and antityphoid vaccine for testing at the Hygienic Laboratory in Washington, D. C. In due time, two certificates were received, showing that the laboratory holds license No. 40 from the United States Treasury Department for the manufacture of antirabic virus and sensitized typhoid vaccine. Although these licenses are not required for the distribution of biological products within the state, they are appreciated as testimony that the State Hygienic Laboratory is applying all the safeguards required by the government in the manufacture of vaccines for immunization against rabies and typhoid fever.

The Milk Conference.

A conference on milk legislation was held on Thursday, September 24, 1914, in the Agricultural Building of the University of California. The conference had been called by the State Dairy Bureau, the State Veterinary Department, the Milk Improvement Association, and the San Francisco Center of the California Civic League. It was well attended by persons interested in public health and the dairy industry. In the afternoon session, a paper, entitled "Milk Legislation for California," was read by the director of the Hygienic Laboratory of the State Board of Health.

Before adjournment, the conference passed the following resolutions:

I.

Resolved, That a committee on legislation be appointed by the chair and that this committee consist of seven members including representatives of the four bodies which have joined in the call for this conference and of the health officials and agricultural interests of California;

That this committee be instructed to formulate legislation in the form of bills to be presented at the next session of the legislature and report back to a later meeting of this conference to be called by the chairman not later than the opening of the coming session of the legislature.

II.

Resolved, That this Conference accepts the report of the New York Milk Commission on milk standards as a statement of an ideal for legislation in this state, but the conference does not wish to restrict the committee to any specific provisions of that report.

III.

Resolved, That the committee be instructed to confer with representatives of the State Dairymen's Association, the City Attorney's Association, and any other bodies known to be planning to present milk laws before the next legislature.

IV.

Resolved, That a representative from the various county medical milk commissions of California, the Dean of the College of Agriculture, the Dean of the University Farm at Davis, a representative of the Dairy Division of the United States Department of Agriculture in California, and a representative of the State Board of Health be asked to serve in an advisory capacity.

Anthrax in Man.

While anthrax bacilli are not uncommonly found in tissues sent to the laboratory from cattle or sheep, it is seldom that material is received from a human case of this disease. The possibility of the infection of man from animals having anthrax shows the importance of avoiding unnecessary handling of the carcasses of animals that have died from this disease, and adds to the reasons for assisting the state veterinarian and the owners of cattle and sheep in the control of anthrax.

On September 18, we received from Dr. J. W. Barnes a culture taken from a carbuncle on the arm of a patient who was suspected of having anthrax. The anthrax bacillus was isolated from the culture and identified by microscopical and cultural tests. The laboratory test confirmed the clinical diagnosis. Through the courtesy of Dr. Barnes a brief account of the case was furnished. On September 2 the patient, a dairyman, removed the hide from a cow which had been found dead in the morning, although apparently well on the previous afternoon. During the process of removing the hide, he scratched himself slightly

on the back of his left hand. On September 11, 1914, he noticed a small, painful and itching pimple at the site of the scratch. This pimple developed into a carbuncle and the hand and wrist became markedly swollen. The center of the carbuncle was blackened and around it was a circle of white vesicles. The patient had fever and headache. After the carbuncle had been excised and the wound had been treated with antiseptics, the swelling of the hand went down and by September 24th, the patient was convalescent.

Division of Biological Examinations.

Summary of Examinations Made in the California State Hygienic Laboratory during the Month of September, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----	6	4	-----	10
Diphtheria -----	23	36	-----	59
Gonococcus infection -----	1	4	1	6
Hookworm -----	-----	1	-----	1
Malaria -----	-----	8	-----	8
Rabies -----	9	9	4	22
Syphilis (Wassermann test) -----	6	23	5	34
Tuberculosis -----	6	23	-----	29
Typhoid (Widal test) -----	25	32	-----	57
Water pollution -----	26	17	12	55
Miscellaneous -----	3	4	-----	7
				288
Northern Branch at Sacramento:				
Diphtheria -----	7	9	-----	16
Malaria -----	3	2	-----	5
Tuberculosis -----	5	11	-----	16
Typhoid (Widal test) -----	21	13	3	37
				74
San Joaquin Valley Branch at Fresno:				
Diphtheria -----	-----	8	1	9
Malaria -----	-----	2	-----	2
Tuberculosis -----	2	3	-----	5
Typhoid (Widal test) -----	-----	5	-----	5
				21
Southern Branch at Los Angeles:				
Diphtheria -----	19	32	1	52
Gonococcus infection -----	-----	1	-----	1
Tuberculosis -----	-----	3	-----	3
Typhoid (Widal test) -----	2	6	-----	8
				64
Total number of examinations -----				447

Original



DEPARTMENT REPORTS—BUREAU OF HYGIENIC LABORATORY.

Division of Preventive Therapeutics.

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory during the Month of September, 1914.

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley.....	5	2
Northern Branch at Sacramento.....	3	0
San Joaquin Valley Branch at Fresno.....	0	0
Southern Branch at Los Angeles.....	8	2
Laboratory of Sacramento Board of Health, by deputized bacteriologist	3	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist	2	1
Laboratory of Los Angeles Board of Health, by deputized bacteriologist	3	0
Laboratory of San Diego City Board of Health, by deputized bacteriologist	0	2
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist	0	0
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist.....	0	0
Totals	24	7

Vaccine for the prevention of typhoid fever issued by the State Hygienic Laboratory during the Month of September, 1914.

Number of physicians to whom vaccine was sent..... 28
Number of complete treatments sent..... 361

Public Health Instruction.

Participation in Instruction in Public Health during September, 1914.

Main Laboratory at Berkeley:
Bacteriological instruction outfits sent out..... 2
Bacteriological instruction outfits in use..... 28
Lectures or talks by the Director..... 5

Division of Epidemiological Investigations.

Epidemiological Investigations during September, 1914.

Main Laboratory at Berkeley:
Special investigations by the Director..... 2
Completion of an investigation of a disease reported to be prevalent among veterans of the Spanish War.
Statistical study of the extent and distribution of rabies in California during the biennial period ending June 30, 1914.

Defective

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR SEPTEMBER, 1914.

M. E. JAFFA, Director.

Upwards of two hundred samples of foods, food products and drugs were received at the laboratory during the month of September. More than 50 per cent of the samples received were drugs of miscellaneous nature.

It is encouraging to note that the quality of the drugs examined is better than was noted at previous times.

A number of evaporated milk samples were collected and examined with the result that very few were found to be below standard. Attention should be called to the fact that there is still retained on the shelves of some of the grocers, old stock representing food products that were made and sold previous to the passage of the pure food and drugs act of March 11, 1907. Inspectors have repeatedly warned the grocerymen concerning this matter, but unfortunately these warnings are forgotten, with the result that on later inspection these old goods are taken up and the samples forwarded to the State Laboratory. It must be thoroughly understood that the Board of Health is not anxious in any way to prosecute but the board is desirous to have on the shelves of stores, nothing but first quality high grade materials, and while it believes firmly in, and carries out the policy of "an ounce of education is worth a pound of prosecution," still if warnings are not heeded, prosecution has to follow. In this connection it does not seem fair that after a groceryman has been warned, and in some cases several times, and been cited to appear before the Board of Health in Sacramento, that the responsibility should be shifted to the wholesaler. From all that can be gathered, it would appear that the wholesaler is more than willing to exchange old goods not properly labeled, etc., for articles which will conform to the law.

Such being the case, there is really no excuse for the retailer not heeding such advice but waiting for the citation before attempting to exchange goods.

Forty-four unofficial samples were also received at the laboratory consisting chiefly of foods, food products and other supplies furnished state hospitals.

No new food inspection decisions have been received at the laboratory during the past month.

The following list of Notices of Judgments have come to hand:

Vinegar, Adulteration and Misbranding of—

Nos. 2986, 3018, 3028, 3030, 3065, 3067, 3089, 3091, 3099, 3103, 3122, 3166, 3177, 3184, 3187, 3192.

Malt and Hop Tonic, Adulteration and Misbranding of—

Nos. 2987, 3001, 3070, 3107.

Extracts, Adulteration and Misbranding of—

Vanilla—Nos. 2988, 2999, 3007, 3016, 3064, 3088, 3138, 3139.

Lemon—Nos. 3045, 3079.

Peppermint—No. 3017.

Strawberry—No. 3092.

Tonka—No. 3045.

Ferro China Antimalarico, Misbranding of—

No. 2989.

Butter, Adulteration and Misbranding of—

Nos. 2990, 3105.

Tomato, Adulteration and Misbranding of—

Pulp, Nos. 2991, 2992, 2993, 3024, 3031, 3108, 3110, 3118, 3144, 3148, 3149, 3152, 3195, 3205, 3209, 3228, 3232, 3234, 3236, 3237.

Conserve, Nos. 3000, 3048, 3081, 3083, 3085, 3093, 3119, 3176, 3239, 3233.

Ketchup—Nos. 3009, 3059, 3082, 3196, 3240, 3241.

Stock—No. 3208.

Jamaica Rum, Adulteration and Misbranding of—
No. 2994.

Eckman's Alterative, Misbranding of—
No. 2995.

Cognac, Adulteration and Misbranding of so-called—

Brandy—Nos. 3023, 3141.

Champagne—No. 3033.

Liquor—No. 3235.

Nurito, Misbranding of—
No. 2997.

Macaroni, Adulteration and Misbranding of—
Nos. 2998, 3215.

Apple Waste and Chop, Adulteration of—
No. 3057.

Apples, Dried, Adulteration of—
Nos. 3147, 3225, 3238.

Apricot Pulp, Adulteration of—
No. 3142.

Beer, Adulteration and Misbranding of—

Nos. 3074, 3078, 3075, 3086, 3090, 3094, 3126, 3134, 3135, 3182, 3219.

Hercules Medicinal Beer, Adulteration and Misbranding of—
No. 3221.

Beans, Adulteration of—
No. 3178.

Bitters, Adulteration and Misbranding of—
Fernet Milano—Nos. 3132, 3133, 3180.
Ferro China—Nos. 3132, 3180.

Brandy, Adulteration and Misbranding of—
Nos. 3034, 3097, 3121.

Candy, Adulteration and Misbranding of—
Gum Drops—No. 3010.
Lozenges—Nos. 3062, 3066.
Mint tablets—No. 3157.

Canned Goods, Adulteration of—
Nos. 3222, 3229.

Casings, Hog Adulteration of—
No. 3150.

Cheese, Adulteration and Misbranding of—
Nos. 3041, 3186, 3217.

Chicken, Adulteration of—
No. 3167.

Chicory, Granulated, Adulteration of—
No. 3169.

Chocolate Paste, Adulteration and Misbranding of—
No. 3040.

Clams, Adulteration of—
No. 3127.

Coca Leaves, Adulteration and Misbranding of Wine—
No. 3019.

Coffee and Chicory, Adulteration and Misbranding of—
Nos. 3015, 3087.

Cordial, Blackberry, Misbranding of—
No. 3188.
Sambuca—No. 3052.

Cream, Adulteration of—
No. 3069.

Eggs, Adulteration of—
Dessicated—Nos. 3036, 3058, 3175, 3189, 3191, 3194.
Frozen—Nos. 3006, 3053.
Shell—Nos. 3151, 3227.

- Feed, Adulteration and Misbranding of—
Alfalfa Molasses—No. 3095.
Barley—Nos. 3063, 3112.
Bran, Wheat—Nos. 3008, 3044, 3073, 3098.
Bran and Shorts—No. 3072.
Corn Chops—Nos. 3014, 3076, 3183, 3185.
Cottonseed meal—Nos. 3050, 3056, 3061.
Mill run—No. 3071.
Molasses—Nos. 3060, 3111.
- Fish, Adulteration of—
Haddock, dried—No. 3190.
Salmon—Nos. 3077, 3102, 3104, 3114, 3120, 3146.
Sardines—No. 3021.
- Flour, Adulteration of—
Nos. 3170, 3181.
Rye—No. 3179.
- Ice Cream, Adulteration and Misbranding of—
Nos. 3026, 3029, 3042.
Cones—No. 3173.
- Iodin, Tincture of, Adulteration and Misbranding of—
No. 3038.
- Jam, Misbranding of Raspberry and Strawberry—
No. 3002.
- Liniment, Misbranding of Smith's Agricultural—
No. 3117.
- Mace, Adulteration and Misbranding of—
No. 3020.
- Microbe Killer, Misbranding of Radam's—
No. 3004.
- Milk, Adulteration and Misbranding of—
No. 3032.
Condensed—Nos. 3131, 3174.
Evaporated—Nos. 3116, 3143.
- Mushrooms, Adulteration of—
No. 3084.
- Egg Noodles, Adulteration and Misbranding of—
No. 3013.
- Nuts, Adulteration of—
Assorted—No. 3005.
Chestnuts—Nos. 3197, 3198, 3210, 3224, 3226.
Walnuts—Nos. 3011, 3012, 3230.
- Oils, Adulteration and Misbranding of—
Birch—Nos. 3200, 3202, 3203, 3204, 3211, 3214, 3218, 3212.
Wintergreen, Nos. 3201, 3202, 3213.
Lemon—No. 3172.
Olive—Nos. 3025, 3115.
Rosemary flowers—No. 3027.
Thyme, red—No. 3027.
- Oranges, Adulteration of Seedling—
No. 3125.
- Oysters, Adulteration of—
No. 3055.
- Peaches, Adulteration and Misbranding of—
Nos. 3145, 3155, 3199.
- Peanut Butter, Misbranding of—
No. 3054.
- Peanuts, Misbranding of shelled—
No. 3080.
- Peas, Adulteration and Misbranding of Canned—
Nos. 3106, 3113, 3156, 3216.
- Pepsin, Misbranding of Wild Cherry—
No. 3231.
- Peppers, Adulteration of Sweet—
No. 3153.
- Pills, Adulteration and Misbranding of—
Calomel—No. 3049.
Neuralgic—No. 3046.

- Pineapple, Adulteration of Canned—
No. 3123.
- Prunes, Adulteration of—
No. 3022.
- Russell's White Drops, Misbranding of—
No. 3154.
- Syrup, Adulteration and Misbranding of—
Cane—Nos. 3096, 3137.
- Soda Water Flavor, Lemon, Adulteration and Misbranding of—
No. 3047.
- Solvent, Misbranding of Dr. Sullivan's sure—
No. 3130.
- Specific No. 3, Misbranding of Dr. Hilton's—
No. 3043.
- Stramoline, Misbranding of—
No. 3124.
- Strawberry Juice, Adulteration and Misbranding of—
No. 3037.
- Tablets, Adulteration and Misbranding of—
Acetanilid compound—No. 3003.
Acetanilid and sodium bromid compound—No. 3019.
Anti-vomiting—No. 3019.
Aspirin—No. 3019.
Bismuth and calomel compound—No. 3019.
Cold—No. 3019.
Hypodermic, soluble and morphin sulfate—No. 3051.
Quinin laxative, salol, and sodium salicylate—No. 3019.
- Turpentine, Adulteration and Misbranding of Spirits of—
No. 3100.
- Vermifuge, Misbranding of Fernet Milano—
No. 3039.
- Water, Adulteration and Misbranding of West Baden Sprudel—
No. 3136.
- Wine, Adulteration and Misbranding of—
Nos. 3193, 3206.
Chenstohow—No. 3220.
Champagne—Nos. 3109, 3158, 3163.
Claret—No. 3128.
Muscatel—No. 3168.
Port—No. 3129.
Scuppernong—Nos. 3035, 3101, 3159, 3140, 3160, 3161, 3162, 3164, 3165, 3171.
- Grapes, Adulteration of—
No. 3207.
- St. Johns Bread, Adulteration of—
No. 3223.

REPORT OF BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for August.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: August.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
August—			
Births -----	4,016	3,747	17.1
Deaths -----	2,792	2,920	11.9
Marriages -----	2,541	2,612	10.8
July—			
Births -----	3,929	3,820	16.7
Deaths -----	2,907	3,108	12.4
Marriages -----	2,897	2,760	12.3

The birth total for August, as for previous months, was greater in 1914 than in 1913, while the death and marriage totals for the current month were somewhat less this year than last.

Moreover, the birth registration for August exceeded the death total by no less than 1,224, or 43.8 per cent.

As to deaths, it may be noted that of the 2,792 decedents in August, some 112, or 4.0 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

Birth, Death and Marriage Totals, for Principal Counties: August.

County	August, 1914		
	Births	Deaths	Marriages
California -----	4,016	2,792	2,541
Counties of more than 25,000 population (1910):			
Alameda -----	421	263	243
Butte -----	34	26	12
Contra Costa -----	50	17	17
Fresno -----	154	106	64
Humboldt -----	51	33	33
Kern -----	49	46	24
Los Angeles -----	1,154	660	610
Marin -----	15	14	58
Orange -----	47	53	117
Riverside -----	39	39	32
Sacramento -----	122	82	101
San Bernardino -----	75	84	61
San Diego -----	142	112	92
San Francisco -----	659	475	457
San Joaquin -----	68	74	55
San Mateo -----	58	28	36
Santa Barbara -----	46	31	29
Santa Clara -----	128	118	99
Santa Cruz -----	36	29	22
Solano -----	45	31	17
Sonoma -----	66	46	44
Tulare -----	56	35	29
Selected groups:			
San Francisco and other bay counties-----	1,203	797	811
Los Angeles and Orange counties-----	1,201	713	727

Birth and Death Totals, for Principal Cities: August.

City	August, 1914	
	Births	Deaths
Freeholders' charter cities-----	2,514	1,640
Cities of more than 15,000 population (1910):		
Alameda -----	39	21
Berkeley -----	73	34
Fresno -----	60	41
Long Beach -----	33	34
Los Angeles -----	756	427
Oakland -----	290	161
Pasadena -----	60	28
Riverside -----	18	22
Sacramento -----	92	71
San Diego -----	100	81
San Francisco -----	659	475
San Jose -----	58	36
Stockton -----	26	41
Selected groups:		
San Francisco -----	659	475
Oakland, Alameda and Berkeley-----	302	216
Total, bay cities-----	961	691
Los Angeles -----	756	427
Neighboring cities -----	133	87
Totals -----	889	514

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Months, for California: August.

Cause of death	Deaths: August	Proportion per 1,000	
		August	July
ALL CAUSES -----	2,792	1,000.0	1,000.0
Typhoid fever -----	37	13.2	15.5
Malarial fever -----	8	2.9	2.7
Measles -----	8	2.9	8.3
Scarlet fever -----	3	1.1	2.1
Whooping-cough -----	34	12.2	8.3
Diphtheria and croup -----	15	5.4	3.1
Influenza -----	6	2.1	1.4
Other epidemic diseases -----	13	4.6	4.1
Tuberculosis of lungs -----	298	106.7	122.8
Tuberculosis of other organs -----	44	15.8	19.3
Cancer -----	213	76.3	76.0
Other general diseases -----	148	53.0	38.2
Meningitis -----	16	5.7	10.3
Other diseases of nervous system -----	210	75.2	91.9
Diseases of circulatory system -----	450	161.2	156.2
Pneumonia and broncho-pneumonia -----	148	53.0	48.2
Other diseases of respiratory system -----	40	14.3	21.0
Diarrhea and enteritis, under 2 years -----	81	29.0	24.4
Diarrhea and enteritis, 2 years and over -----	31	11.1	12.4
Other diseases of digestive system -----	154	55.2	58.8
Bright's disease and nephritis -----	211	75.6	69.8
Childbirth -----	22	7.9	9.6
Diseases of early infancy -----	120	43.0	39.2
Suicide -----	77	27.6	25.4
Other violence -----	276	98.8	93.2
All other causes -----	129	46.2	37.8

In August there were 450 deaths, or 16.1 per cent of all, from diseases of the circulatory system, and 342, or 12.3 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis greatly.

Other notable causes of death in August were: Violence, 353; diseases of the digestive system, 266; diseases of nervous system, 226; cancer, 213; Bright's disease and nephritis, 211; diseases of respiratory system, 188; and epidemic diseases, 124.

The deaths from epidemic diseases were as follows: Typhoid fever, 37; whooping-cough, 34; diphtheria and croup, 15; malarial fever and measles, each 8; and all other epidemic diseases, 22.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Typhoid fever		Whooping-cough		Diphtheria and croup	
Butte	1	Alameda	7	Alameda	3
Colusa	1	Butte	2	Amador	1
Fresno	3	Contra Costa	1	Butte	1
Imperial	2	Humboldt	1	Contra Costa	1
Inyo	1	Kings	1	Fresno	1
Kern	1	Los Angeles	4	Humboldt	1
Kings	1	Mendocino	1	Los Angeles	4
Los Angeles	3	Merced	1	San Diego	1
Mariposa	1	Monterey	1	San Francisco	1
Mendocino	1	Orange	1	Tulare	1
Orange	2	Riverside	1		
Sacramento	4	Sacramento	2	Total	15
San Joaquin	3	San Bernardino	2		
San Luis Obispo	1	San Diego	2		
San Mateo	1	San Francisco	2		
Santa Clara	1	San Mateo	1		
Sonoma	2	Santa Clara	1		
Tehama	1	Shasta	1		
Trinity	1	Siskiyou	2		
Tulare	1				
Ventura	1	Total	34		
Yolo	1				
Yuba	3				
Total	37				

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: August.

Geographic division	Deaths: August										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
THE STATE	2,792	124	342	213	226	450	188	266	211	353	419
Northern California	294	27	22	23	25	41	13	23	18	53	49
Coast counties	148	10	12	15	15	15	8	12	11	23	27
Interior counties	146	17	10	8	10	26	5	11	7	30	22
Central California	1,475	65	175	117	114	243	108	154	109	182	208
San Francisco	475	10	60	44	41	96	36	54	25	48	61
Other bay counties	322	18	39	28	18	62	32	23	24	27	51
Coast counties	185	6	25	13	20	30	12	30	13	16	20
Interior counties	493	31	51	32	35	55	28	47	47	91	76
Southern California	1,023	32	145	73	87	166	67	89	84	118	162
Los Angeles	660	17	91	49	53	111	46	51	57	73	112
Other counties	363	15	54	24	34	55	21	38	27	45	50
Northern and Central California	1,769	92	197	140	139	284	121	177	127	235	257
Metropolitan area	797	28	99	72	59	158	68	77	49	75	112
Rural counties	972	64	98	68	80	126	53	100	78	160	145

Sex, Race and Nativity.—The proportion of the sexes among the 2,792 decedents in August was: Male, 1,774, or 63.5 per cent; and female, 1,018, or 36.5 per cent.

The race distribution of decedents was: White, 2,624, or 94.0 per cent of all; Chinese, 56; negro, 50; Japanese, 47; and Indian, 15.

The 2,624 white decedents were classified by nativity as follows: California, 726, or 27.7 per cent; other states, 1,032, or 39.3 per cent; foreign countries, 766, or 29.2 per cent; and unknown, 100, or 3.8 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: August.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
ALL AGES -----	2,792	1,774	1,018	100.0	100.0	100.0
Under 1 year -----	312	172	140	11.2	9.7	13.8
1 to 4 years -----	129	75	54	4.6	4.2	5.3
5 to 9 years -----	48	24	24	1.7	1.4	2.4
10 to 19 years -----	75	42	33	2.7	2.4	3.2
20 to 29 years -----	230	148	82	8.3	8.3	8.1
30 to 39 years -----	307	214	93	11.0	12.1	9.1
40 to 49 years -----	318	217	101	11.4	12.2	9.9
50 to 59 years -----	364	245	119	13.0	13.8	11.7
60 to 69 years -----	430	271	159	15.4	15.3	15.6
70 years and over -----	579	366	213	20.7	20.6	20.9

This table shows that relatively more females than males died at the age periods under 20 years as well as 60 years and over, while relatively more males than females died at the age periods from 20 to 59 years.

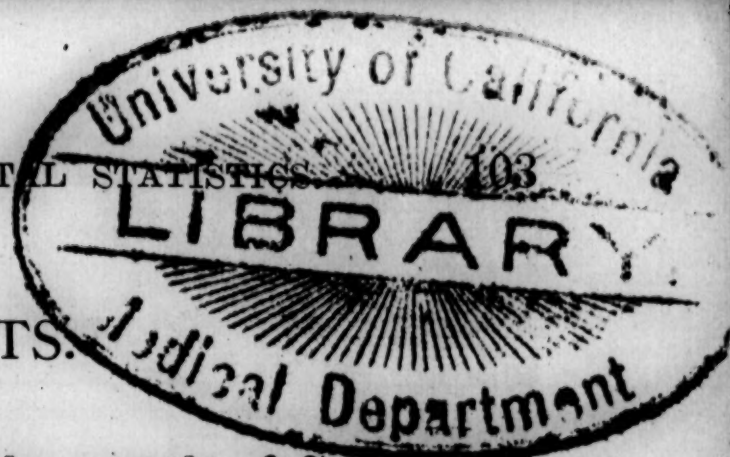
Length of Residence.—The table below gives the number and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: August.

Length of residence	Deaths	Per cent
Total -----	2,792	100.0
Under 1 year -----	112	4.0
1 to 9 years -----	594	21.3
10 years and over -----	1,046	37.5
Life -----	750	26.8
Unknown -----	290	10.4

It appears from this table that 4.0 per cent of all decedents had resided in California less than one year, and altogether 25.3 per cent had lived in the State under ten years. Residents of ten years' standing comprised 37.5 per cent of all decedents, and native Californians who had been here for life comprised 26.8 per cent, the length of residence being unknown for 10.4 per cent of all decedents.

Original Defective



MORBIDITY REPORTS.

Smallpox.

Smallpox showed a great reduction during the month of September. There were only 14 cases reported. These were well scattered, as is shown by the fact that the disease appeared in eight different counties of the state. Three cases were in Eureka, being the last of a small epidemic which occurred during the month of August. Of the 14 cases reported ten had never been vaccinated, one was vaccinated more than seven years preceding the attack and for three others no histories of vaccination were obtainable. This is the smallest number of smallpox cases that have been reported during any current month for over a year.

Typhoid Fever.

Contrary to tradition, typhoid showed a falling off during September. There were only 131 cases reported as against 211 during August. It must be borne in mind, however, that 70 of the cases reported during August were those that appeared in the Healdsburg outbreak. The cases reported during September were well distributed over the state, 29 counties having reported cases. It is probable that there were many more cases, which were not reported by physicians. These are so few in number, however, that they would probably not alter the total for the month to any material extent.

Poliomyelitis.

Berkeley and San Francisco reported the only cases of poliomyelitis that appeared during September. Two of these were in San Francisco. September and October generally bring the greatest number of cases of this disease, and the small number reported during September is contrary to precedent.

Epidemic Cerebro-Spinal Meningitis.

Four cases of this disease were reported, one each having occurred in Hayward, Los Angeles, Pasadena and San Diego.

Chickenpox.

Chickenpox shows a slight increase for September. One hundred and seventy-one cases were reported, while only 62 cases were reported during August.

Erysipelas.

Thirteen cases of erysipelas occurred, the cases having been well scattered throughout the state.

German Measles.

Two cases of German measles were reported.

Dysentery.

Three cases of dysentery were reported, the first cases of this disease to have been reported recently. This disease has appeared in an unusual form and investigations are to be undertaken in connection with it.

throughout

Gonococcus Infection.

There were 40 cases of gonococcus infection reported during September.

Leprosy.

One case of leprosy was reported from Merced County. The patient is a Mexican who drifted into the town of Merced.

Malaria.

More cases of this disease were reported during September than have been reported for some months, the number being 58. Large numbers of cases of this disease are present in California, but they are not all reported by physicians.

Mumps.

There were 68 cases of mumps reported, which is a considerable increase, as there were only 12 reported during the previous month.

Pellagra.

Two cases of pellagra were reported. A number of deaths from this disease have been reported during the past month; in all cases, however, the patients came from one of the southern states and without doubt brought the disease into California. It is very doubtful if any cases of pellagra are of local origin. Physicians are not generally aware that pellagra is reportable and steps are being taken to secure a general reporting of cases of this disease.

Pneumonia.

Forty-six cases of pneumonia were reported, which is the smallest number reported during the summer months.

Syphilis.

There were only 14 cases of syphilis reported during September.

Tetanus.

Four cases of tetanus were reported during the month.

Trachoma.

Three cases of this disease were reported. Trachoma is reported only from the larger cities of the state.

Tuberculosis.

There were 510 cases of tuberculosis reported, which is a slight increase over August when 405 cases were reported. Physicians and health officers are showing a disposition to report cases of this disease more generally than in the past.

Whooping-cough.

Eighty-five cases of whooping-cough were reported, which is about the normal number for this time of year.

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.

Reported during September, 1914.

Disease	Total number of new cases reported during the month in the entire State
Scarlet fever -----	132
Measles -----	710
Diphtheria -----	198
Dysentery -----	3
Chickenpox -----	171
Erysipelas -----	13
German measles -----	2
Gonococcus infection -----	40
Leprosy -----	1
Malaria -----	58
Mumps -----	68
Pellagra -----	2
Pneumonia -----	46
Syphilis -----	14
Tetanus -----	4
Trachoma -----	3
Tuberculosis -----	510
Whooping-cough -----	85

Smallpox.

Distribution of Cases reported during September, 1914.

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vac- cinated more than seven years preceding attack	Number never suc- cessfully vaccinated	Vaccination history not ob- tained or uncertain
Humboldt County -----						
Eureka -----	3				3	
Imperial County -----	1				1	
Holtville -----	2				2	
Kern County -----	1		1			
Los Angeles County -----	1				1	
Los Angeles -----	1					1
Nevada County -----						
Grass Valley -----	1				1	
Orange County -----	1				1	
San Francisco -----	2					2
Santa Barbara County -----						
Santa Barbara -----	1				1	
Totals -----	14		1		10	3

Typhoid Fever.*Distribution of Cases reported during September, 1914.*

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----		Sacramento County -----	1
Alameda -----	1	Sacramento -----	9
Albany -----	1	San Benito County -----	1
Berkeley -----	10	San Bernardino County -----	
Hayward -----	1	San Bernardino -----	1
Oakland -----	4	San Diego County -----	1
Piedmont -----	1	Chula Vista -----	1
Colusa County -----	3	National City -----	1
Contra Costa County -----		San Francisco -----	24
Martinez -----	1	San Luis Obispo County -----	1
Pittsburg -----	1	Santa Barbara County -----	
Fresno County -----		Santa Maria -----	1
Clovis -----	2	Siskiyou County -----	
Humboldt County -----		Etna -----	2
Eureka -----	1	Solano County -----	1
Imperial County -----		Sonoma County -----	2
Calexico -----	1	Cloverdale -----	1
Los Angeles County -----	4	Healdsburg -----	5
Burbank -----	1	Stanislaus County -----	1
Long Beach -----	1	Oakdale -----	1
Lordsburg -----	1	Trinity County -----	2
Los Angeles -----	18	Tulare County -----	3
Madera County -----		Porterville -----	1
Madera -----	2	Tulare -----	2
Modoc County -----	1	Yolo County -----	4
Nevada County -----		Woodland -----	1
Nevada City -----	1	Yuba County -----	
Orange County -----	2	Marysville -----	2
Placer County -----			
Roseville -----	1	Total -----	131
Plumas County -----	2		
Riverside County -----			
Corona -----	1		

Poliomyelitis (Infantile Paralysis).*Distribution of Cases reported during September, 1914.*

Counties and cities	Number of new cases reported during month
Alameda County -----	
Berkeley -----	1
San Francisco -----	2
Total -----	3

Epidemic Cerebro-Spinal Meningitis.*Distribution of Cases reported during September, 1914.*

Counties and cities	Number of new cases reported
Alameda County -----	
Hayward -----	1
Los Angeles County -----	
Los Angeles -----	1
Pasadena -----	1
San Diego County -----	
San Diego -----	1
Total -----	4

SPECIAL NOTICE TO PHYSICIANS.

DEPARTMENT OF THE INTERIOR,
OFFICE OF INDIAN AFFAIRS,
WASHINGTON, September 18, 1914.

*President of the State Board of Health
of California.*

MY DEAR DR. REGENSBERGER:

At a conference of various officials from state boards of health in session at a recent convention in Washington with the Commissioner of Indian Affairs it was deemed advisable to suggest the publication in state board of health bulletins of a statement setting forth the attitude of the government regarding the payment of accounts submitted by physicians not connected with the Indian Service in the treatment of diseased or injured Indians, so that a clear understanding of the legal responsibility of the government toward such obligations might be reached by all physicians in the states where Indians are located. In connection therewith the following decision of the auditor for the Interior Department in the settlement of a characteristic case is cited:

APRIL 15, 1913.

HERMAN A. FEIKER, M. D.,

Poplar, Montana.

SIR: Certification has been made this day to the Secretary of the Treasury that there is nothing due from the United States to you for professional services rendered in June, 1912, in the performance of a surgical operation upon, and the subsequent treatment of, Carl Walking Eagle, an Indian of the Fort Peck Reservation, together with expenses incurred in connection therewith. Settlement No. 35,261. Amount claimed, \$400.00; amount allowed, \$0.00; disallowed, \$400.00. Explained as follows:

From the correspondence accompanying this claim, it appears plainly that the services rendered and expenses incurred were not authorized by any officer of the Indian Service, or any other competent authority, but had their initiative solely with the individuals concerned.

The fact that the party operated upon was an Indian does not, in and of itself, create a legal obligation against the United States, or justify payment from any appropriation made by the Government for the support of the tribe to which he belongs. If the physical condition of the Indian was such as to require the treatment he received, *there were proper channels provided, with adequate machinery, and duly authorized agents to put it into operation, for his relief.*

This was not done, but on the contrary, the matter was undertaken primarily as a private proceeding, whether begun by the Indian himself, or at the instigation of the physician, does not appear. The ultimate hope, however, of both was undoubtedly that the United States would pay the bill.

It is a well established rule of accounting that no one, by volunteer service, can make himself a public creditor.

The Controller of the Treasury, in his decision of March 7, 1902 (VIII, p. 586), says:

"I do not recall an instance where a legal claim can arise against the United States, except by virtue of some act of Congress, or from a contract, express or implied. The law does not imply a contract on the part of the United States, to reimburse a person who may voluntarily pay a claim against it."

As then, in this case, there was no contract, express or implied, whereby a legal obligation can arise against the Government, the claim is disallowed.

Respectfully,

H. C. SHOBER, Auditor.

In this case it is plainly shown that the resources of the Government for the care of this sick Indian had not been exhausted, nor had an appeal been made thereunto, the decision stating specifically, "there were proper channels provided, with adequate machinery, and duly authorized agents to put it into operation for his relief."

While the Government is prepared and ready to care for the wards under its jurisdiction, no obligation against the Government can accrue except through previous authorization, and any treatment extended to an Indian ward of the Government in the Indian country without previous notification and authorization from some employee of the Government qualified to issue such authorization, can not constitute a legitimate claim against the Government, and the party rendering such assistance will be expected to secure his compensation from the Indian for whom the services were rendered or from the parties employing the physician's services. Where any assistance is rendered an Indian by a physician which did not permit of the procuring of previous authorization, immediate steps should be taken by that physician to notify the proper authorities in the Indian country, or the Commissioner of Indian Affairs in Washington, D. C., before further service is rendered, that proper authorization may be secured.

Please give this communication space in your official journal to assist us in an effort to secure a wide publicity for this information.

Very truly yours,

CATO SELLS,
Commissioner of Indian Affairs.

NOVEMBER BULLETIN.

REPORT OF THE BUREAU OF ADMINISTRATION.

JOHN F. LEINEN, Director.

Civic economy suggests that city and county health officers be better paid. The question should not be "how small an amount will satisfy a man," but "what returns shall the city or county receive for its investment?"

The practice of selecting a physician, allowing him to receive a small fee each month to "look after" the work, and permitting him to look after his private practice as a means of livelihood is a pernicious one. It is not right for the city nor right for the physician and it is not economy either. There is probably not a city of twenty-five hundred population in California but will find it profitable to secure the exclusive services of a properly qualified man to act as health and sanitary officer. In addition, there should undoubtedly be a county health officer in every county in the state. These men will find all the work they can do, and may become not only the busiest men in their respective communities, but it will be found that no other official can produce as large a profit.

What we believe to be another serious mistake is the present manner of selecting the health officer. So far the question is purely political. That can not be conducive to the best interests of the community.

The practice often followed of naming the leading practitioner as health officer is by no means indicative of a good choice. It is probably more often the reverse. A physician becomes a competent practitioner only after intelligent and arduous study of curative measures. The more successful he is the more he has specialized in his chosen work to the exclusion of those particular sciences that have to do with preventive measures.

Removing health departments from politics; selecting the right man, paying him the right salary, and permanent tenure of the position will do much to correct existing evils.

There is no official of more importance to any community than a conscientious and capable health officer. The conserver of the health of our people is a benefactor of the race and worthy of the highest honors in the gift of the state.

REPORT OF THE BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for September.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method, with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: September.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
September—			
Births -----	4,041	3,773	17.8
Deaths -----	2,804	2,788	12.3
Marriages -----	2,826	2,831	12.4
August—			
Births -----	4,016	3,747	17.1
Deaths -----	2,792	2,920	11.9
Marriages -----	2,541	2,612	10.8

The September birth total was considerably greater in 1914 than in 1913, while the death and marriage totals for this month were not far from the same each year.

Moreover, the birth registration exceeded the death total for September by no less than 1,237, or 44.1 per cent.

As to deaths, it may be noted that of the 2,804 decedents in September some 99, or 3.5 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the state, the list being limited to counties having a population of at least 25,000 according to the federal census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco Bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

Birth, Death and Marriage Totals, for Principal Counties: September.

County	September, 1914		
	Births	Deaths	Marriages
California	4,041	2,804	2,826
Counties of more than 25,000 population (1910):			
Alameda	397	273	276
Butte	42	17	20
Contra Costa	65	28	20
Fresno	153	62	84
Humboldt	32	27	26
Kern	65	34	51
Los Angeles	1,055	638	665
Marin	35	24	54
Orange	94	52	105
Riverside	61	27	33
Sacramento	154	99	100
San Bernardino	105	72	72
San Diego	133	98	114
San Francisco	673	535	527
San Joaquin	74	98	59
San Mateo	53	27	38
Santa Barbara	35	30	31
Santa Clara	137	104	94
Santa Cruz	44	20	19
Solano	39	24	21
Sonoma	57	57	58
Tulare	63	40	42
Selected groups:			
Sar Francisco and other bay counties.....	1,223	887	915
Los Angeles and Orange counties.....	1,149	690	770

Birth and Death Totals, for Principal Cities: September.

City	September, 1914	
	Births	Deaths
Freeholders' charter cities.....	2,517	1,678
Cities of more than 15,000 population (1910):		
Alameda	37	18
Berkeley	85	27
Fresno	69	17
Long Beach	41	27
Los Angeles	708	390
Oakland	242	166
Pasadena	52	32
Riverside	27	9
Sacramento	123	85
San Diego	94	71
San Francisco	673	535
San Jose	48	33
Stockton	37	67
Selected groups:		
San Francisco	673	535
Oakland, Alameda and Berkeley.....	364	211
Total, bay cities.....	1,037	746
Los Angeles	708	390
Neighboring cities	125	85
Totals	833	475

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Months, for California: September.

Cause of death	Deaths: September	Proportion per 1,000	
		September	August
All causes -----	2,804	1,000.0	1,000.0
Typhoid fever -----	35	12.5	13.2
Malarial fever -----	12	4.3	2.9
Measles -----	4	1.4	2.9
Scarlet fever -----	4	1.4	1.1
Whooping-cough -----	20	7.1	12.2
Diphtheria and croup -----	28	10.0	5.4
Influenza -----	8	2.9	2.1
Other epidemic diseases -----	5	1.8	4.6
Tuberculosis of lungs -----	305	108.8	106.7
Tuberculosis of other organs -----	55	19.6	15.8
Cancer -----	218	77.7	76.3
Other general diseases -----	106	37.8	53.0
Meningitis -----	17	6.1	5.7
Other diseases of nervous system -----	245	87.4	75.2
Diseases of circulatory system -----	483	172.2	161.2
Pneumonia and broncho-pneumonia -----	166	59.2	53.0
Other diseases of respiratory system -----	65	23.2	14.3
Diarrhea and enteritis, under 2 years -----	60	21.4	29.0
Diarrhea and enteritis, 2 years and over -----	25	8.9	11.1
Other diseases of digestive system -----	148	52.8	55.2
Bright's disease and nephritis -----	191	68.1	75.6
Childbirth -----	39	13.9	7.9
Diseases of early infancy -----	96	34.2	43.0
Suicide -----	86	30.7	27.6
Other violence -----	256	91.3	98.8
All other causes -----	127	45.3	46.2

In September there were 483 deaths, or 17.2 per cent of all, from diseases of the circulatory system and 360, or 12.8 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis greatly.

Other notable causes of death in September were: Violence, 342; diseases of the nervous system, 262; diseases of digestive system, 233; diseases of respiratory system, 231; cancer, 218; Bright's disease and nephritis, 191; and epidemic diseases, 116.

The deaths from epidemic diseases were as follows: Typhoid fever, 35; diphtheria and croup, 28; whooping-cough, 20; malarial fever, 12; influenza, 8; and all other epidemic diseases, 13.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Typhoid fever		Diphtheria and croup		Whooping-cough	
Alameda	3	Alameda	3	Alameda	4
Butte	1	Humboldt	1	Butte	1
Colusa	1	Kern	1	Colusa	1
El Dorado	1	Los Angeles	5	Contra Costa	3
Fresno	1	Riverside	1	Los Angeles	5
Imperial	1	San Bernardino	1	Mendocino	1
Los Angeles	5	San Francisco	15	Sacramento	2
Orange	1	San Joaquin	1	San Francisco	2
Sacramento	2			Santa Clara	1
San Bernardino	1	Total	28	Total	20
San Francisco	5				
San Joaquin	3				
Santa Barbara	2				
Solano	1				
Sonoma	5				
Stanislaus	1				
Tulare	1				
Total	35				

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of northern and central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: September.

Geographic division	Deaths: September										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
The State	2,804	116	360	218	262	483	231	233	191	342	368
Northern California	303	16	28	20	41	56	23	30	15	34	40
Coast counties	156	8	13	12	20	28	17	13	7	21	17
Interior counties	147	8	15	8	21	28	6	17	8	13	23
Central California	1,545	76	192	116	118	272	143	116	114	200	198
San Francisco	535	27	76	44	31	102	49	49	36	60	61
Other bay counties	352	14	43	22	26	68	44	16	31	40	48
Coast counties	163	6	12	17	23	36	16	9	7	18	19
Interior counties	495	29	61	33	38	66	34	42	40	82	70
Southern California	956	24	140	82	103	155	65	87	62	108	130
Los Angeles	638	17	109	60	70	104	36	54	46	60	82
Other counties	318	7	31	22	33	51	29	33	16	48	48
Northern and Central California	1,848	92	220	136	159	328	166	146	129	234	238
Metropolitan area	887	41	119	66	57	170	93	65	67	100	109
Rural counties	961	51	101	70	102	158	73	81	62	134	129

Sex, Race and Nativity.—The proportion of the sexes among the 2,804 decedents in September was: Male, 1,732, or 61.8 per cent; and female, 1,072, or 38.2 per cent.

The race distribution of decedents was: White, 2,649, or 94.5 per cent; Japanese, 54; negro, 50; Chinese, 35; and Indian, 16.

The 2,649 white decedents were classified by nativity as follows: California, 712, or 26.9 per cent; other states, 1,003, or 37.8 per cent; foreign countries, 850, or 32.1 per cent; and unknown, 84, or 3.2 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents, of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: September.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
All ages -----	2,804	1,732	1,072	100.0	100.0	100.0
Under 1 year-----	273	140	133	9.7	8.1	12.4
1 to 4 years-----	115	68	47	4.1	3.9	4.4
5 to 9 years-----	47	27	20	1.7	1.6	1.9
10 to 19 years-----	90	53	37	3.2	3.1	3.4
20 to 29 years-----	239	129	110	8.5	7.4	10.3
30 to 39 years-----	303	192	111	10.8	11.1	10.4
40 to 49 years-----	339	226	113	12.1	13.0	10.5
50 to 59 years-----	396	258	138	14.1	14.9	12.9
60 to 69 years-----	423	281	142	15.1	16.2	13.2
70 years and over-----	579	358	221	20.7	20.7	20.6

This table shows that relatively more females than males died at the early age periods under 30 years, while relatively more males than females died at the later age periods of 30 years and over.

Length of Residence.—The table below gives the number and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: September.

Length of residence	Deaths	Per cent
Total -----	2,804	100.0
Under 1 year-----	99	3.5
1 to 9 years-----	554	19.8
10 years and over-----	1,141	40.7
Life -----	757	27.0
Unknown -----	253	9.0

It appears from this table that 3.5 per cent of all decedents had resided in California less than one year, and altogether 23.3 per cent had lived in the state under ten years. Residents of ten years' standing comprised 40.7 per cent of all decedents, and native Californians who had been here for life comprised 27.0 per cent, the length of residence being unknown for 9.0 per cent of all decedents.

MORBIDITY REPORTS.**Smallpox.**

Nineteen cases of smallpox were reported during October. These cases were reported from eleven counties, there being no outbreak of importance. Ten of the persons who contracted the disease had never been vaccinated, six had been vaccinated more than seven years preceding attack and for three cases no vaccination histories were obtainable.

Typhoid Fever.

One hundred and seventy-three cases of typhoid fever were reported during October. These cases appeared in twenty-nine counties of the state; the largest number to appear in any one city was twenty-six, in Los Angeles. Twenty-two cases were reported from Sacramento, however; San Francisco reported nineteen and Oakland fourteen cases. There were not so many cases reported during October of the present year as have been reported during that month of previous years.

Poliomyelitis.

There were but five cases of poliomyelitis reported during October. This small number is unusual for this time of year, as more cases are generally reported during August, September and October than during any other months. The year of 1914 has been exceptional in this regard.

Epidemic Cerebrospinal Meningitis.

Seven cases of this disease were reported. Three of these occurred in Los Angeles, two in San Francisco, one in Orange and one in San Diego.

Chickenpox.

Chickenpox shows an increase in October. Two hundred and fifty-seven cases were reported. One hundred and seventy-one cases were reported during September.

Anthrax.

A case of human anthrax was reported in a man residing in San Benito County.

Erysipelas.

There were eighteen cases of erysipelas reported, the cases being well scattered over the state.

Disentery.

Six cases of dysentery were reported, four of which were in Alameda County.

Gonococcus Infection.

Thirty-nine cases of this disease were reported during October.

Malaria.

There was a slight decrease in the number of cases of malaria reported during October, the total being forty for the month of October as against fifty-eight for September. This disease is not reported as thoroughly by physicians as might be desired.

Mumps.

There were but eighteen cases of mumps reported during October.

Pellagra.

Four cases of pellagra were reported. There has been a considerable increase in the number of cases of this disease to appear in California, and health officers have been instructed to be very alert in detecting any new cases that may appear. During the past few months there has been a considerable number of deaths from the disease and the early report of any cases suspicious of pellagra is earnestly desired.

Pneumonia.

Seventy-four cases were reported, which is about the number that is usually reported.

Syphilis.

Forty cases of this disease were reported. Most of these were reported from state institutions.

Tetanus.

Three cases of tetanus were reported during October.

Trachoma.

There were but five cases of trachoma reported.

Tuberculosis.

There were five hundred and forty-nine cases of tuberculosis reported during October, which is the largest number ever reported during any one month. The cooperation of physicians and health officers is desired in making reports of this disease.

Whooping-cough.

Sixty-six cases of this disease were reported, which is a slight decrease over the preceding month.

Measles.

One thousand and eighty-five cases of measles were reported during October. This is a considerable increase over September, when seven hundred and ten cases were reported.

Diphtheria.

Almost twice as many cases of diphtheria were reported during October as were reported during September. There was no outbreak of great importance excepting at Petaluma, where it was necessary to close the schools, theaters, etc., for several days.

Scarlet Fever.

Scarlet fever also shows marked increase during October, as three hundred and thirty-six cases were reported. During September there were but one hundred and thirty-two cases. The advent of cooler weather and consequent closer contact within doors, is undoubtedly responsible for the increase.

Smallpox.

Distribution of Cases reported during October, 1914.

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vaccinated more than seven year preceding attack	Number never successfully vaccinated	Vaccination history not obtained or uncertain
Humboldt -----						
Eureka -----	1					1
Imperial County -----						
Holtville -----	2				2	
Madera County -----						
Madera -----	1					1
Orange County -----						
Santa Ana -----	2				2	
Plumas County -----						
Quincy -----	1				1	
Riverside County -----						
Corona -----	2				2	
San Joaquin County -----						
Stockton -----	3			3		
Santa Clara County -----						
Mountain View -----	1			1		
Stanislaus County -----						
Modesto -----	4			1	3	
Placer County -----						
Roseville -----	1			1		
Tulare County -----						
Porterville -----	1					1
Total -----	19			6	10	3

Typhoid Fever.

Distribution of Cases reported during October, 1914.

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----		Sacramento County -----	2
Berkeley -----	2	Sacramento -----	22
Oakland -----	14	San Benito County -----	1
Contra Costa County -----		San Bernardino County -----	4
Antioch -----	1	Ontario -----	7
Martinez -----	2	San Bernardino -----	3
Fresno County -----		San Diego County -----	
Coalinga -----	2	San Diego -----	1
Fresno -----	1	San Francisco -----	19
Kern County -----		San Joaquin County -----	2
Bakersfield -----	1	Stockton -----	6
Maricopa -----	1	San Luis Obispo County -----	
Los Angeles County -----	10	San Luis Obispo -----	1
Claremont -----	1	Santa Clara County -----	
Long Beach -----	2	San Jose -----	1
Los Angeles -----	26	Sierra County -----	1
Monrovia -----	1	Siskiyou County -----	
Venice -----	2	Etna Mills -----	1
Madera County -----		Solano County -----	1
Madera -----	3	Sonoma County -----	
Merced County -----		Santa Rosa -----	1
Los Banos -----	1	Sebastopol -----	4
Modoc County -----	1	Stanislaus County -----	1
Monterey County -----	3	Trinity County -----	2
Nevada County -----	1	Tulare County -----	2
Grass Valley -----	1	Dinuba -----	1
Nevada City -----	1	Tulare -----	2
Orange County -----		Yolo County -----	1
Fullerton -----	2	Yuba County -----	
Newport Beach -----	1	Marysville -----	2
Placer County -----			
Rocklin -----	2	Total -----	173

Epidemic Cerebrospinal Meningitis.*Distribution of Cases reported during October, 1914.*

Counties and cities	Number of new cases reported
Los Angeles County-----	
Los Angeles-----	3
Orange County-----	
Orange-----	1
San Diego County-----	
San Diego-----	1
San Francisco County-----	
San Francisco-----	2
Total-----	7

Poliomyelitis (Infantile Paralysis).*Distribution of Cases reported during October, 1914.*

Counties and cities	Number of new cases reported during month
Alameda County-----	
Berkeley-----	1
Sacramento County-----	
Sacramento-----	1
San Francisco County-----	
San Francisco-----	2
Sonoma County-----	1
Total-----	5

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.*Reported during October, 1914.*

Disease	Total number of new cases reported during the month in the entire state
Scarlet fever-----	336
Measles-----	1,085
Diphtheria-----	345
Dysentery-----	6
Anthrax-----	1
Chickenpox-----	257
Erysipelas-----	18
Gonococcus infection-----	39
Malaria-----	40
Mumps-----	18
Pellagra-----	4
Pneumonia-----	74
Syphilis-----	40
Whooping-cough-----	66
Tetanus-----	3
Typhoid fever-----	172
Trachoma-----	5
Tuberculosis-----	549

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR
OCTOBER, 1914.

M. E. JAFFA, Director.

During the month of October, upwards of one hundred samples of foods and drugs were received for examination and analysis. Of these about twenty-five samples were of drugs, miscellaneous in character. A number of samples of aromatic spirits of ammonia have been examined, and it is to be regretted that most of these are still below the standard required. There should not be any reason for the poor quality of this drug because if it is made and kept in accordance with the rules and regulations indicated by the pharmacopœia, the strength will not deteriorate appreciably. This is indicated by results of examinations made in this laboratory. The samples of ammonia had been properly made in accordance with the directions given in the pharmacopœia, and analyzed weekly. For the past nine weeks there has been practically no loss whatever. During the first two weeks there was a loss of less than 1 per cent. Since that time there has been practically no loss, indicating that if the drug is correctly made and properly kept, the quality will not be appreciably below that of the standard.

This office has had considerable correspondence with reference to the proper labeling of drugs and medicines. The following, just at hand from the Department of Agriculture, is of great interest in this connection, and is therefore reprinted:

21. Suggestions for labeling medicines under the Sherley amendment to the Food and Drugs Act, June 30, 1906.

The bureau has received many inquiries relative to the proper labeling of medicinal preparations in compliance with the requirements of the Food and Drugs Act, as amended by the act of August 23, 1912, commonly known as the Sherley amendment.

The following suggestions are offered to manufacturers or proprietors of such preparations to serve as a guide in the preparation of labels.

1. *Claims of therapeutic effects.*—A preparation can not be properly designated as a specific, cure, remedy, or recommended as infallible, sure, certain, reliable or invaluable, or bear other promises of benefit unless the product can as a matter of fact be depended upon to produce the results claimed for it. Before making any such claim the responsible party should carefully consider whether the proposed representations are strictly in harmony with the facts; in other words, whether the medicine in the light of its composition is actually capable of fulfilling the promises made for it. For instance, if the broad representation that the product is a remedy for certain diseases is made, as, for example, by the use of the word "remedy" in the name of the preparation, the article should actually be a remedy for the affections named upon the label under all conditions, irrespective of kind and cause.

2. *Indirect statements.*—Not only are direct statements and representations of a misleading character objectionable, but any suggestion, hint, or insinuation, direct or indirect, or design or device that may tend to convey a misleading impression should be avoided. This applies, for example, to such statements as "has been widely recommended for," followed by unwarranted therapeutic claims.

3. *Indefinite and sweeping terms.*—Representations that are unwarranted on account of indefiniteness of a general sweeping character should be avoided. For example, the statement that a preparation is "for kidney troubles" conveys the impression that the product is useful in the treatment of kidney affections generally. Such a representation is misleading and deceptive unless the medicine in question is actually useful in all of these affections. For this reason it is usually best to avoid terms covering a number of ailments, such as "skin diseases, kidney, liver, and bladder affections," etc. Rheumatism, dyspepsia, eczema, and the names of many other affections are more or less comprehensive, and their use under some circumstances would be objectionable. For example, a medicine should not be recommended for rheumatism unless it is capable of fulfilling the claims and representations made for it in all kinds of rheumatism. To represent that a medicine is useful for rheumatism, when as a matter of fact it is useful in only one form of rheumatism, would be misleading; such statements as "for some diseases of the kidney and liver," "for many forms of rheumatism," are objectionable, on account of indefiniteness.

Names like "heart remedy," "kidney pills," "blood purifier," "nerve tonic," "bone liniment," "lung balm," and other terms involving the names of parts of the body are objectionable for similar reasons.

4. *Testimonials.*—Testimonials, aside from the personal aspect given them by their letter form, hold out a general representation to the public for which the party doing the labeling is held to be responsible. The fact that a testimonial is genuine and honestly represents the opinion of the person writing it does not justify its use if it creates a misleading impression with regard to the results which the medicine will produce.

No statement relative to the therapeutic effects of medicinal products should be made in the form of a "testimonial" which would be regarded as unwarranted if made as a direct statement of the manufacturer.

5. *Refund guarantee.*—Statements on the labels of drugs guaranteeing them to cure certain diseases or money refunded may be so worded as to be false and fraudulent and to constitute misbranding. Misrepresentations of this kind are not justified by the fact that the purchase price of the article is actually refunded as promised.

The foods examined include a miscellaneous variety. Quite a number of samples of evaporated milk have been examined and it is gratifying to know that there are few samples which vary from the standard. Unfortunately, however, there still are some brands of condensed milk, not made in California, which are objectionable in that they do not meet the requirements of Food Inspection Decision No. 131. It is true that the analysis is printed on the can, but that does not help matters. Food Inspection Decision No. 131 calls for 26.5 solids and 7.8 of fat. On some of the labels will be noticed: Contains 24.5 per cent total solids, 7.8 per cent fat. Such labels are misleading and deceiving to the layman. It would appear that the man who is labeling his goods as to contents is putting up a better product than the man who merely labels his product "Evaporated Milk," without any analysis, whereas in truth and in fact the reverse is the case. The manufacturer who puts out a product without the analysis being stated on the label, is the man who is putting out the milk in accordance with the law. This only emphasizes the point that the simpler the label, the better the goods.

The following excerpts from the Service and Regulatory Announcements, issued by the U. S. Department of Agriculture during the month of October, are of interest to manufacturers, dealers and consumers in this state, and are therefore here reprinted.

No Notices of Judgments have been received in time for this month's bulletin.

22. Notice to manufacturers of tomato pulp.

The tomato packing season is now opening, and to insure a clean product the attention of packers is called to the statements and suggestions relative to the examination of tomato ketchup as given in Circular 68 of the Bureau of Chemistry.

While it is believed to be possible for manufacturers of tomato products to keep within the limits given—25 million bacteria per cubic centimeter, 25 yeasts and spores per one-sixtieth cubic millimeter, and molds in less than 25 per cent of the fields—and that these are the desirable maximum limits, they are in no case to be regarded as the final standard by which products of this nature are to be judged. Such products should be judged by no single factor but by all the factors involved, including the degree of concentration.

While the microscopic examination is of great value in determining the quality of the finished product, it is believed that the expense of microscopic examination can better be expended on factory inspection. It is recommended that manufacturers place greater stress upon the inspection of their raw material, and on the regulation of factory methods in order to assure themselves that no unfit material is used, that the products are handled in a cleanly and sanitary manner, and that proper sterilization results. The packer who knows that he is using only sound material and sanitary methods usually has a much better knowledge of his products than that secured by a superficial examination of the finished material.

When microscopic examinations are made they should be made by those specially trained in bacteriology, microscopy, and examination of plant structures, in order to secure trustworthy results. The chemist, even though he be an experienced analyst

usually has only a superficial knowledge of bacteriology and microscopy. Many manufacturers are employing inexperienced persons to make examinations by the methods given in Circular 68, and are depending upon the results obtained to determine whether or not their products comply with the requirements of the Food and Drugs Act. It has been brought to the attention of the bureau that manufacturers and buyers frequently reject and destroy wholesome food products, with the consequent loss, as the result of such untrustworthy examinations.

It is the intention of the Bureau of Chemistry to enforce more rigidly the requirements of the law relative to the use of unfit material in food products, and the suggestions made above are offered with the object of directing attention to the points where they will do the most good. It is much preferred to improve the character of food products by assisting the manufacturer than by summoning him into court.

23. Notice to oyster growers and dealers.

The attention of the bureau has recently been called to the fact that many oyster dealers are resorting to the practice of soaking shucked oysters prior to shipping them in interstate commerce. It is desired at this time to call attention to Food Inspection Decision No. 110, paragraph 6, which states that "it is unlawful to ship or to sell in interstate commerce shucked oysters to which water has been added." This decision covers the abnormal washing and chilling of oysters, which practice has the effect of soaking. The bureau will take active steps to enforce this decision.

It is desired to call the attention of the growers and dealers to this condition and regulation, and request their cooperation in suppressing this practice.

Opinions of general interest regarding questions arising under the Food and Drugs Act.

Extracts from correspondence.¹

¹It should be understood that the opinions expressed in the letters from which these extracts are taken are offered in an advisory capacity, as representing the attitude of the bureau in the light of its present knowledge and of the facts presented by the correspondents. In order to avoid the publication of unnecessary matter, the letter form has been dispensed with and those portions of the correspondence which do not bear on the subject in question have been omitted.

80. Tomatoes packed in brine.

It is the opinion of the bureau that canned tomatoes, when labeled as such, must comply strictly with the requirements of Food Inspection Decision 144, and that the addition of water, brine, or juice in excess of that naturally present in the tomatoes canned would constitute an adulteration.

There would appear to be no objection, however, to packing whole tomatoes in brine if sold under a label which clearly distinguishes them from canned tomatoes. In declaring the quantity of the contents of the food in such a package the statement should be based upon the weight of the tomatoes, exclusive of the brine.

81. The use of cocoanut oil in the manufacture of compressed mints.

This bureau makes no objection to the use of cocoanut oil in the manufacture of compressed mints, for the purpose of lubrication and in the proportion of one half of one per cent.

82. Misleading labels on packages of mixed candies.

Packages of mixed candies labeled "all fruit flavors," "assorted fruit flavors," "fruit flavors," etc., are considered misbranded if the candies contained therein are prepared by the use of both true and artificial fruit flavors, for the reason that such labeling would give the impression that only true fruit flavors have been used.

83. Importations of butter under certificates from foreign governments that they are free from preservatives.

Inquiry has been made as to whether this department accepts butter coming from Queensland, Australia, on the certificate of the Queensland government that it does not contain preservative. The department will receive such certificates, but the right has been reserved to make examination from time to time, if desired, to determine if the butter is of satisfactory quality and free from preservative.

84. The protein factor. Amendment to Letter 58 in S. R. A., Chem. 6, p. 420.

In the opinion of this bureau the factor 5.70 is more nearly the correct factor for protein in all straight wheat products, including bran and shorts, than is the factor 6.25. In view of the established custom, both in trade practice of buying and selling and in inspection work, of using the factor 6.25, however, a concession will be made in the case of feeds and products commonly used as ingredients thereof, allowing the use of the factor 6.25. In the event it is decided to require the use of the factor 5.70 in wheat products other than flour and gluten, at least six months' advance notice will be given the trade.

85. Cotton seed meal.

The following statement has been made in response to questions regarding the status of cotton seed meal under the Food and Drugs Act.

1. Cotton seed meal is classed as a food and is subject to the Food and Drugs Act, as amended, and to the regulations issued thereunder.

2. When cotton seed meal is sold as a fertilizer for fertilizing purposes, and under the fertilizer laws of various states, and is so labeled or tagged, it will be considered as a fertilizer and not subject to the requirements of the Food and Drugs Act or regulations relating thereto.

3. If cotton seed meal classed and labeled as damaged or off meal is sold as a fertilizer, such meal will be classed as a fertilizer and not as a food, and therefore is not subject to the requirements of Food Inspection Decision No. 154.

4. No definite statement can be made as to whether a declaration of weight need be made on shipments of cotton seed meal or cake sold in bulk. The details of selling, packing, and shipping would have to be considered in each case in order to reach a definite conclusion.

5. Shipments of cotton seed meal or cake in package form in the channels of commerce, described in the Food and Drugs Act, must be marked in accordance with the provisions of the amendment of March 3, 1913, and the regulations issued thereunder (F. I. D. 154), irrespective of any marking or branding which may be done subsequent to delivery to consignee.

6. The same regulations apply to cotton seed cake and cracked cake as to cotton seed meal.

7. Shipments of cotton seed cake and meal on domestic bills of lading would be subject to the requirements of the Food and Drugs Act, while those intended for export to any foreign country and actually exported would not be deemed misbranded or adulterated within the provisions of the act if prepared or packed according to the specifications or directions of the foreign purchaser, when no substance is used in the preparation or packing thereof in conflict with the laws of the foreign country to which they are intended to be shipped.

86. Statement of quantity of contents on bags of green coffee.

Inquiry has been made as to whether green coffee in bags imported from Brazil should be marked with a statement of the quantity of the contents in accordance with the provisions of the act of March 3, 1913, commonly known as the Net Weight Amendment to the Federal Food and Drugs Act.

It is stated that green coffee is commonly received from Brazil in cargo lots packed in bags weighing approximately 132 pounds each, and that such bags of green coffee seldom, if ever, reach the ultimate consumer, there being practically no demand among such consumers for unroasted coffee.

The question whether green coffee in bags constitutes food in package form within the meaning of the Net Weight Amendment is, in the opinion of the department, not entirely free from doubt. Under the circumstances the department will for the present interpose no objection to the importation of green coffee in bags solely upon the ground that such bags are not plainly and conspicuously marked with a statement of the quantity of the contents.

Should it finally be decided by the department that bags of green coffee constitute food in package form within the meaning of the law, public notice of such a decision will be given and importers afforded an opportunity of making the necessary arrangements, in the countries from which coffees are imported, to have the necessary statements placed upon the bags.

87. Statement of quantity of contents on packages of fresh oysters.

When fresh shucked oysters are shipped in interstate commerce in returnable packages which are refrigerated, these packages should be plainly and conspicuously marked with a statement of the net contents, by measure, in terms of the largest unit of measure and fractions thereof, in the package, or in terms of weight, if preferred, if there is a trade custom to this effect.

There appears to be no objection to labeling with a statement of quantity, under these conditions, by means of a tag which is firmly affixed to the package, providing it is made conspicuous.

88. Quantity of the contents of canned oysters, canned clams, and canned shrimp to be declared on cut-out weights of the drained meat.

In the opinion of this bureau, the quantity of the contents of a package of canned (cove) oysters or canned clams, as usually packed and processed, should be declared on the basis of the cut-out weight of the drained meat. This also applies to canned shrimp.

In this connection attention is called to Letters Nos. 2 and 3, in Bureau of Chemistry Service and Regulatory Announcements for January, 1914, which state the weights of drained meat which, in the opinion of the bureau, satisfactorily fulfill the requirements of Food Inspection Decision 144 in the case of canned oysters and clams.

89. Statement of quantity of contents on packages of flavoring extracts.

If a bottle of flavoring extract is placed in a permanent carton and is delivered to the consumer in the carton, the regulation (F. I. D. 154) would seem to be satisfied if the statement of quantity appears only on the carton. The law itself requires merely that the statement shall appear on the outside of the package. If the carton is a part of the permanent package, a statement placed upon it would seem to be on the outside of the package within the meaning of the Net Weight Amendment.

90. Statement of quantity of contents on packages of catsup.

In the opinion of the bureau, catsup may be sold either by weight or by measure, in conformity with paragraph (f) of Food Inspection Decision 154.

91. Alum in pickles.

The Referee Board of Consulting Scientific Experts has investigated the influence of aluminum compounds on the nutrition and health of man. The results of this investigation have been published in Department Bulletin 103.

The board came to the conclusion that the amount of alum which remains in pickles and is therefore consumed is so small as to be negligible. From the information at hand it also appears that alum is almost universally used in the preparation of pickles and may, therefore, be considered a common ingredient of such products.

In view of these facts, this bureau offers no objection to the use of a small amount of alum in the preservation of pickles.

92. Labeling of tamarind sirup.

The examination of many samples of so-called tamarind sirup on the market shows that they contain little or no tamarind, but consist mainly of a sugar sirup colored with caramel and flavored with citric or tartaric acid. It is considered that a tamarind sirup should contain sufficient tamarind to give it the characteristic tamarind flavor. A sirup containing no tamarind, or only an immaterial amount, flavored with citric or tartaric acid and colored with caramel to simulate sirup of tamarinds, should be labeled as imitation tamarind sirup.

93. Substances used for correcting deficiency in saccharine matter in musts and wines (F. I. D. 156).

Food Inspection Decision No. 156 (S. R. A., Chem. 6, p. 415) reads, in part, as follows:

To correct the natural defects above mentioned the following additions to musts or wines are permitted:

* * * * *

In the case of deficiency in saccharine matter, condensed grape must, or a pure dry sugar.

It is the opinion of this department that such a sugar as has been sold under the trade designation of "anhydrous sugar," or any sugar of similar composition and purity, may be employed for the purpose stated in the food inspection decision.

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR OCTOBER, 1914.

WILBUR A. SAWYER, M.D., Director. J. C. GEIGER, M.D., Chief Bacteriologist.

Health Officials' Conference.

The bureau was represented by the director at the Health Officials' Conference held at Del Monte from October 12th to 16th. The value of the laboratory to the local health officials is increased by the annual conferences, which permit free discussion and exchange of information regarding the purpose and work of the bureau. Plans for future development of the bureau were discussed in a paper read before the conference.

The meetings were held outdoors under the beautiful pines of Del Monte. The beauty and invigorating air of the meeting place in the open added greatly to the pleasure of the conference.

Bacteriological Examinations of Drinking Water.

Water samples are examined at the State Hygienic Laboratory only when they are sent, properly iced, in containers furnished by the laboratory. Application must be made in advance, through the local health officer, to the director of the State Hygienic Laboratory. Examinations which have no bearing on the public health can not be performed. There is no charge for examinations at the State Hygienic Laboratory, but the express charges both ways must be paid by the officials or persons requesting the examinations.

The samples should be taken at such a time that they will reach the laboratory with the least possible delay, and will not arrive, or be in transit, on Saturday or Sunday.

The bacteriological examination of water includes bacterial counts and quantitative presumptive tests for colon bacilli. Water samples are not examined for typhoid bacilli, as search for these organisms is not practical, giving as a rule negative results even in dangerously polluted waters.

The presence of colon bacilli, normal inhabitants of the intestines of man and animals, indicates fecal pollution, and, when they are persistently abundant, they almost invariably denote sewage pollution. All sewage-polluted water is potentially dangerous, since, where human fecal matter exists, the germs of typhoid fever and other water-borne diseases may appear at any time. Colon bacilli are not dangerous in themselves, but they are significant as indicators of the probable presence of disease germs. The mixed sewage of cities is almost certain at all times to contain typhoid bacilli from the excreta of typhoid carriers or missed cases, even in the absence of recognized typhoid fever.

The most important part of the investigation of a drinking water supply is the field investigation of the possible sources of pollution. The laboratory tests should always be subordinate to such an investigation.

Laboratory tests can not show whether colon bacilli in the water were derived from the excreta of animals or the much more dangerous sewage carrying the feces of human beings. Neither can the labora-

tory determine whether a slight pollution at one time would mean a heavy pollution at another, owing to fluctuations in the volume of sewage or to seasonal variations in the amount of water.

Certain conclusions can, however, be drawn from the laboratory reports alone. If colon bacilli are not demonstrable in 10 cc. of the water, it may be regarded as safe for drinking purposes at the time of the taking of the sample—as far as sewage pollution and consequent danger from typhoid fever and other water-borne diseases is concerned. If colon bacilli are demonstrable in 10 cc., but not in 1 cc., the water may be looked upon as under suspicion, and a field examination is necessary to determine whether or not it is safe. If colon bacilli are found in 1 cc. of the water, but not in 0.1 cc., the water should be

regarded as probably unsafe, and a purification process should be installed if the sources of contamination, animal or human, can not be removed. If colon bacilli are found in 0.1 cc. of the water, or smaller amounts, the water should be considered as polluted to such a point as to be unsafe for drinking purposes.

Division of Biological Examinations.

Summary of Examinations made in the California State Hygienic Laboratory during the month of October, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----	2	8	-----	10
Diphtheria -----	100	133	8	241
Gonococcus infection -----	4	6	-----	10
Hookworm -----	-----	1	-----	1
Malaria -----	1	7	-----	8
Plague -----	-----	1	-----	1
Rabies -----	4	7	-----	11
Syphilis (Wassermann test) -----	8	31	10	49
Tuberculosis -----	3	34	-----	37
Typhoid (Widal test) -----	4	16	-----	20
Typhoid (feces) -----	-----	1	1	2
Water pollution -----	10	26	6	42
Miscellaneous -----	10	5	2	17
				449
Northern Branch at Sacramento:				
Diphtheria -----	8	31	-----	39
Malaria -----	2	6	-----	8
Tuberculosis -----	5	7	-----	12
Typhoid (Widal test) -----	12	9	1	22
				81
San Joaquin Valley Branch at Fresno:				
Diphtheria -----	2	17	-----	19
Malaria -----	-----	1	-----	1
Tuberculosis -----	1	4	-----	5
Typhoid (Widal test) -----	-----	4	-----	4
				29
Southern Branch at Los Angeles:				
Diphtheria -----	53	78	2	133
Gonococcus infection -----	2	18	-----	20
Malaria -----	-----	1	-----	1
Tuberculosis -----	2	2	-----	4
Typhoid (Widal test) -----	2	9	1	12
				170
Total number of examinations -----	-----	-----	-----	729

Division of Preventive Therapeutics.

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory during the month of October, 1914.

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley.....	6	7
Northern Branch at Sacramento.....	1	4
San Joaquin Valley Branch at Fresno.....	0	0
Southern Branch at Los Angeles.....	0	6
Laboratory of Sacramento Board of Health, by deputized bacteriologist.....	0	3
Laboratory of San Francisco Board of Health, by deputized bacteriologist.....	0	2
Laboratory of Los Angeles Board of Health, by deputized bacteriologist.....	2	3
Laboratory of San Diego City Board of Health, by deputized bacteriologist.....	0	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist.....	0	0
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist.....	0	0
Totals	9	25

Vaccine for the Prevention of Typhoid Fever Issued by the State Hygienic Laboratory during the month of October, 1914.

Number of physicians to whom vaccine was sent..... 14
 Number of complete treatments sent..... 357

Public Health Instruction.

Participation in Instruction in Public Health during October, 1914.

Main Laboratory at Berkeley:
 Bacteriological instruction outfits sent out..... 2
 Bacteriological instruction outfits in use..... 29
 Lectures or talks by the director..... 5

Division of Epidemiological Investigations.

Epidemiological investigations during October, 1914..... 0

REPORT OF THE BUREAU OF TUBERCULOSIS FOR OCTOBER, 1914.

BURT F. HOWARD, M.D., Director.

The response of physicians throughout the state to the efforts of this bureau in securing the registration of cases of tuberculosis has thus far been very commendable, not so much because returns are beginning to have a degree of significance numerically, but rather because they show that many physicians have the modern viewpoint in respect to their responsibility in reporting the increasing cases of tuberculosis. If the present rate of increase in tuberculosis morbidity reports could but continue it would not be many years to the time when we could stop guessing as to the nature and extent of our tuberculosis problem.

It is planned each month to publish a summary of the data submitted upon the tuberculosis report cards, omitting local data. This summary will be for the preceding month in order to allow time for at least approximately complete returns, while reports received too late for the monthly summary will appear in the corrected annual report.

During September there were five hundred and ten (510) cases of tuberculosis reported to this bureau, and during the same time there were three hundred and sixty (360) deaths recorded from the same cause in the bureau of vital statistics. For the years in which tuberculosis morbidity statistics are available for this state the record is as follows:

Tuberculosis.

September, 1912,	reported at death, 316;	reported before death, 129.
September, 1913,	reported at death, 405;	reported before death, 204.
September, 1914,	reported at death, 360;	reported before death, 510.

Thus it will be seen that the time has arrived when the morbidity reports exceed the mortality record. This is greatly to be desired, as statistics which state that more die of a disease than are ill with it, are plainly false, and certainly tuberculosis does not by any means kill all those affected with it.

It will be noted in the table below that data are given in but 260 cases of the 510. The reason for this is chiefly because San Francisco is still reporting by name and address only. In the near future it is hoped to have standard report cards in use there. In addition to the 510 cases included in the above report there are 35 cases which died before the report was rendered, but in which cards were submitted with data, making the total number of cards filed 545.

When the type of disease is not indicated on the card it is assumed to be pulmonary. There were 85 not stated on the September cards.

The problem of the imported case is apparent this month, there being more than five times as many imported as native California cases.

The same tendency is apparent in a study of the length of residence in California, but this truth has been established more accurately by the Tuberculosis Commission in a study of five-year period of death records.

Data on Cases of Tuberculosis reported during September.

Number of cases-----	260	Length of residence in California:	
Under 5 years-----	1	Under 1 year-----	39
5 to 14 years-----	8	1 year-----	19
15 to 24 years-----	45	2 years-----	11
25 to 34 years-----	77	3 years-----	17
35 to 44 years-----	49	4 years-----	10
45 years and over-----	66	5 years-----	9
Unknown-----	14	6 years-----	7
		7 years-----	8
Sex:		8 years-----	8
Male-----	163	9 years-----	2
Female-----	93	10 years-----	7
Unknown-----	4	10 to 20 years-----	40
		Over 20 years-----	46
Marital condition:		Unknown-----	37
Single-----	111		
Married-----	101	Number of persons in family:	
Widowed, separated or divorced-----	24	Families of one-----	7
Unknown-----	24	Families of two-----	34
		Families of three-----	30
Dwelling:		Families from 4 to 15-----	49
Detached-----	92	Average, 5.	
Flat-----	4		
Tenement-----	7	Tuberculosis in family:	
Boarding-----	10	Father-----	14
Hotel-----	22	Mother-----	17
Hospital-----	32	Brother-----	13
Other-----	8	Sister-----	12
Unknown-----	85	Husband-----	2
		Wife-----	5
Housing:		Children-----	5
Good-----	101	Others-----	9
Fair-----	44		
Poor-----	15	Bacteriological examination:	
Unknown-----	100	Tubercle bacilli positive-----	149
		Tubercle bacilli negative-----	29
Financial condition:		Not stated-----	82
Independent-----	31		
Wage earner-----	56	Prognosis:	
Indigent-----	55	Good-----	44
Unknown-----	118	Bad-----	61
		Not stated-----	117
Occupational condition:		Doubtful-----	38
Good-----	33		
Fair-----	23	Type:	
Poor-----	15	Tuberculosis of the lungs-----	239
Unknown-----	189	Tuberculosis of other organs-----	25
		Duplicated-----	4
Nativity:			
California-----	35	Cases reported with data-----	260
Elsewhere in United States-----	112	Without above data-----	250
Foreign-----	74	Total living cases reported-----	510
Unknown-----	39		
Race or color:			
White-----	197		
Negro-----	8		
Indian-----	3		
Chinese-----	1		
Japanese-----	2		
Unknown-----	49		

On October 9th the director of the Bureau of Tuberculosis met with Dr. W. A. Sawyer of the Hygienic Laboratory to consider plans for a tuberculosis exhibit at the Panama-Pacific Exposition, and on October 10th with the California Association for the Study and Prevention of Tuberculosis with a similar object. Plans for the year's work were also discussed, with a view to complete unity of action between the charitable organizations and this bureau.

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR OCTOBER, 1914.

ANNE C. JAMME, R.N., Director.

During the month of October, an inspection was made of seventeen training schools for nurses, located in the southern part of the state. Of these, ten are maintaining a three-year course, and a systematic, theoretical and practical course of instruction. Two have arranged for an affiliation with another hospital for practical experience not given in the home school. These affiliations are for three and nine months, respectively, in accordance with the limitations in the capacity of the hospitals with which these schools are connected. These affiliations have been arranged particularly for the care of sick children.

Where affiliations have been in operation for some time, the hospitals report satisfactory results. The student after the allotted time in her affiliated school, returns to the home school to complete her course and receive her diploma. This is found to be of particular advantage to the small hospital, strengthening the course and giving to the student seeking a general and well rounded out course in nursing, the opportunities desired. There appears to be a general activity in nursing work; hospitals are reporting an increase in applicants for the training schools and in many instances a waiting list. Many applicants are high school and college graduates, which may be significant of the definite place the schools of nursing will hold in the field of vocational work. Young women now seeking admittance to schools for nurses are inquiring as to the preparation they should have before entering, the special studies to be taken up, as also the advantages offered. The upbuilding of the schools of nursing in this state may serve or give purpose to the vocational work in the public school system and contribute greatly to the preparation of the pupil before entering the training school.

The work of the bureau has been greatly aided by the hearty co-operation of the superintendent of the training schools, and while realizing the difficulties and problems that continually present themselves in the schools, the bureau will endeavor to lend consideration and assistance whenever required.

MILK LEGISLATION FOR CALIFORNIA.*

By W. A. SAWYER, M.D., Director of the Hygienic Laboratory of the California State Board of Health.

Milk is so constituted that it is peculiarly fitted to convey infectious diseases. Our methods of distributing it in towns and cities are such that, when the combination of circumstances happens to be right, an explosive outbreak of some disease like typhoid fever, or septic sore throat, appears. Strange to say, it is not always a dirty dairy or a carelessly run distributing station which is to blame. I can not conceive of a general system of inspection of dairies and examination of employees which working alone would eliminate entirely the danger even from typhoid fever. At a conservative estimate there are over one hundred typhoid carriers produced in California every year, and several times this number are carried over from previous years. There is no practical system by which one could detect among dairy employees the elusive and intermittent typhoid carrier, even if we could discover and control all the ambulatory and atypical acute cases of typhoid fever. If we are not equal to the task of protecting the public against milk-borne typhoid fever by inspection alone, we are certainly more helpless when it comes to the other diseases less thoroughly understood, or less spectacular. Bovine tuberculosis and diarrhoeal diseases among children, for instance, make us begin to see the impracticability at present of trying to render the entire milk supply sufficiently safe by improving only the cleanliness of production and the manner of distribution.

It is possible to overcome the danger from milk-borne disease by pasteurization done as near to the time of delivery to the consumer as possible. Our present knowledge regarding milk leads us to believe that pasteurization does not diminish the healthfulness or food value of the constituents of milk, and that, from the standpoint of the consumer, there can be no objections to the process.

I feel strongly that we need well enforced state laws providing for:

First, the pasteurization of all market milk, excepting that very small part of the total supply which is produced under exceptionally good conditions at a high cost of production.

Second, a system of inspection and laboratory testing which will insure that the milk is in good condition when it reaches the pasteurizing plant, and that it is not contaminated nor allowed to deteriorate between the time of pasteurization and delivery.

One of the objections heard against pasteurization is that it would permit the production of milk so dirty that it could not be marketed without pasteurization. Dirty milk can not be made into good milk by pasteurizing, because it is already changed chemically, for the worse. The possibility of disguising dirty milk by pasteurization emphasizes the need for inspection.

It would be futile for me to outline the various measures which would be desirable for the control of milk production, since the latest

*Read before the Conference on Milk Legislation, University of California, Berkeley September 24, 1914.

word in milk control has been formulated in the second report* of the Commission on Milk Standards appointed by the New York Milk Committee. This report represents the work of a body of seventeen prominent men, including sanitarians, bacteriologists, chemists, and agriculturists. The report was approved on September 11th of last year by the American Health Association. If we can unite in accepting the provisions of this report as an ideal toward which to strive, it will release much time and energy for the difficult task of devising in detail laws which can be enforced and which will protect the consumer while obviously fair to the producer.

The New York Commission on Milk Standards advocates laws which classify milk and label it according to the conditions under which it is produced as determined by inspections and by chemical and bacteriological examinations, so that the buyer can have as good milk as he can pay for. In addition it makes all milk reasonably safe by compelling the pasteurization of market milk except perhaps the very best.

An efficiently enforced statewide milk law will not only make milk much safer, but it will also improve the position of the dairyman by unifying to a certain extent the demands of public health workers, physicians, agriculturists, and the public for a better and safer milk supply.

*Public Health Reports, U. S. Public Health Service, Vol. XXVIII, No. 34, pp. 1733-1756.

LIST OF COUNTY AND CITY HEALTH OFFICERS.

Alameda County—

Dr. C. L. McKown	Niles
Alameda	Dr. A. Hieronymus
Albany	Dr. F. R. Woolsey
Berkeley	Dr. J. J. Benton
Emeryville	Dr. A. T. Drennan
Hayward	Dr. F. W. Browning
Livermore	Dr. H. G. McGill
Oakland	Dr. Allen F. Gillihan
Piedmont	George T. Burtchaell
Pleasanton	Dr. J. Hal Cope
San Leandro	Dr. Luther Michael

Alpine County—

Mr. Fred S. Dunlap—Markleeville

Amador County—

Dr. E. E. Endicott	Jackson
Jackson	George Hambric
Sutter Creek	W. A. Burres

Butte County—

Dr. L. L. Thompson	Gridley
Biggs	Dr. O. C. Hawkins
Chico	G. H. Taylor
Gridley	Dr. L. L. Thompson
Oroville	Dr. W. F. Gates

Calaveras County—

Dr. George F. Pache	Angels Camp
Angels Camp	Dr. E. W. Weirich

Colusa County—

Dr. C. A. Poage	Colusa
Colusa	Dr. C. A. Poage

Contra Costa County—

Dr. W. S. George	Antioch
Antioch	Dr. W. S. George
Concord	Dr. F. F. Neff
Hercules	Dr. M. L. Fernandez
Martinez	Dr. Edwin Merrithew
Pinole	Dr. M. L. Fernandez
Pittsburg	Dr. F. S. Gregory
Richmond	Dr. Chas. R. Blake

Del Norte County—

Dr. E. M. Fine	Crescent City
Crescent City	Dr. E. M. Fine

El Dorado County—

Dr. L. M. Leisenring	Placerville
Placerville	P. J. Hall

Fresno County—

Dr. G. L. Long	Fresno
Clovis	Dr. M. S. McMurtry
Coalinga	Dr. C. W. Hutchison
Fowler	Dr. C. O. Mitchel
Fresno	Dr. L. R. Willson
Kingsburg	Dr. J. A. Gillespie
Reedley	Dr. J. D. Hare
Sanger	Dr. Thos. F. Madden
Selma	Dr. O. H. Steinwand

Glenn County—

Dr. J. A. Randolph	Willows
Oriand	Dr. D. L. Martin
Willows	Dr. J. T. Gardner

Humboldt County—

Dr. Carl T. Wallace	Eureka
Arcata	Dr. G. W. McKinnon
Blue Lake	Dr. O. P. Floreth
Eureka	Dr. L. A. Wing
Ferndale	Dr. J. A. Lane
Fortuna	Dr. Orville Rockwell

Imperial County—

Dr. Virgil McCoombs	El Centro
Brawley	Dr. Eugene Le Baron
Calexico	Dr. H. C. Richter
El Centro	C. L. Longstreth
Holtville	J. C. Nale
Imperial	Dr. C. E. Standlee

Inyo County—

Dr. I. J. Woodin	Independence
Bishop	Dr. C. E. Turner

Kern County—

Dr. C. A. Morris	Bakersfield
Bakersfield	H. Farris
Maricopa	Dr. H. N. Taylor
Taft	Dr. F. C. Galehouse
Tehachapi	Dr. N. J. Brown, Jr.
McKittrick	

Kings County—

Dr. C. L. Scott	Hanford
Lemoore	Dr. W. P. Byron
Hanford	Dr. C. L. Scott

Lake County—

Dr. W. E. Upton	Kelseyville
Kelseyville	Dr. W. E. Upton
Lakeport	J. G. West

Lassen County—

Dr. W. E. Dozier	Susanville
Susanville	Dr. E. S. Drucks

Los Angeles County—

Dr. E. O. Sawyer	Los Angeles
Alhambra	Dr. F. E. Corey
Arcadia	Dr. Chas. E. Nordhoff
Avalon	K. W. Hidy
Azusa	Dr. L. W. Atkinson
Burbank	Dr. E. H. Thompson
Claremont	Dr. F. W. Thomas
Compton	J. W. Stone
Covina	Dr. J. D. Reed
Eagle Rock	Dr. C. H. Phinney
El Monte	Dr. S. L. Corpe
Glendale	Dr. R. E. Chase
Glendora	Dr. C. H. Wood
Hermosa Beach	B. F. Brown
Huntington Park	Dr. W. Thompson
Inglewood	Dr. H. A. Putnam
Long Beach	Dr. R. L. Taylor
Lordsburg	Dr. J. E. Hubble
Los Angeles	Dr. L. M. Powers
Manhattan Beach	E. M. Jenkins
Monrovia	Dr. J. L. Pomeroy
Pasadena	Dr. Stanley P. Black
Pomona	Dr. Will H. Holmes
Redondo Beach	Dr. D. R. Hancock
San Fernando	Dr. Benj. B. Ward
San Gabriel	Dr. Ruth Purcell
San Marino	
Santa Monica	Dr. Chas. G. Shipman
Sawtelle	Dr. W. O. Blanchar
Sierra Madre	Dr. R. H. Mackerras
South Pasadena	Dr. C. F. Metcalf
Tropico	Dr. Wm. C. Mabry
Venice	Dr. W. M. Kendall
Vernon	Dr. O. R. Stafford
Watts	
Whittier	Dr. W. H. Stokes

Madera County—

Dr. Dow H. Ransom	Madera
Madera	Dr. L. St. John Hely

Marin County—

Dr. J. H. Kuser	Novato
Belvedere	Dr. Florence Scott
Larkspur	Dr. J. E. McCue
Mill Valley	James V. Chase
Ross	Dr. Harry O. Hund
San Anselmo	Dr. O. W. Jones
San Rafael	Dr. W. J. Stone
Sausalito	Dr. A. H. Mays

Mariposa County—

Dr. J. M. Hicks	Mariposa
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Mendocino County—

Dr. Judson Liftchild	Ukiah
Fort Bragg	Dr. L. C. Gregory
Point Arena	N. A. McCallum
Potter Valley	W. T. Eddie
Ukiah	Dr. J. Liftchild
Willits	Dr. F. C. Gunn

DECEMBER BULLETIN.

REPORT OF THE BUREAU OF ADMINISTRATION FOR NOVEMBER, 1914.

JOHN F. LEINEN, Director.

In addition to the general routine work of the Bureau, the following matters have been acted upon:

A complaint was received relative to the outlet of the sewer at Gustine, Merced County. The complaint was referred to the County Health Officer, who investigated and reported that conditions were as stated; that he took the matter up with the owners of the sewer and they declared that they would cut off all private connections with the sewer, in which event the residents would have to return to using cesspools, thereby creating a worse nuisance than now exists. The Health Officer states that he will take the matter into the courts for adjustment.

The City Health Officer of Santa Cruz requested the Board to send an inspector to assist the city in finding a better location for its septic tank, as the present location necessitates the emptying of the effluent into the river. Application blanks were sent to Santa Cruz with instructions to have them filled out, when the Consulting Engineer would be sent to investigate the situation.

Letter received from the City Health Officer of Eureka stating that the Elk River, which is the source of supply for Eureka, is being polluted. Matter referred to County Health Officer, who reported that the river is being polluted by the town of Falk.

A request was received from Dr. E. A. Kusel for an investigation of the Oroville water supply, taken from the west branch of the Feather River. Blanks were sent on which to make formal application for this investigation, and Dr. Kusel was informed that on receipt of these blanks the Board would instruct its Consulting Engineer to make the necessary investigation and report.

The State Hygienic Laboratory has analyzed the following water samples and copies of the Laboratory's reports are on file in this office:

Water supplies of Jackson; Nevada City; Grass Valley; the Enterprise and Monroe School Districts, Sonoma County; Sutter Creek; Suisun; Walnut Creek; San Mateo; Weaverville; Hotel Hemet, Lake Hemet and Strawberry Creek, Riverside County; Davis Creek, Modoc County; Amador Canal; Bear River Ditch, Auburn; Crutcher System at Auburn; well of C. H. Van Doren at Weed. The supplies of the Southern Pacific Company taken for passenger trains at Truckee, Sacramento; Arcade Depot, Los Angeles City; Blue Canyon; Roseville; Pacific Grove Station; Del Monte Station; San Jose; Santa Cruz; Watsonville Junction; Santa Barbara; Redlands; San Bernardino; Indio; Riverside; Colton; Santa Clara; Willows; Geyserville; Stockton; Tracy; Callexico; Third and Townsend streets, San Francisco; the supplies of the Western Pacific Railroad Company taken for passenger trains at Boca and Oakland; the supplies of the Atchison, Topeka and Santa Fe taken for passenger trains at Bakersfield and San Bernardino

City; sterilization plant; the supply of the Pacific-Alaska Navigation Company's steamship Admiral Schley; the supply of the Yosemite Valley Railway Company taken from Crane Creek, El Portal; the Pacific Coast Railroad Company's supply taken from Arroyo Grande; the Pacific Electric Company's supply taken from Kern River; the Pacific Light and Power Company's supply taken from Eagle Rock, Los Angeles County; the supply of the Butte County Railway Company.

Certificates of analysis of water for use in interstate passenger traffic were issued to the Southern Pacific Company for supplies taken from Third and Townsend streets, San Francisco; Santa Barbara; Redlands; San Bernardino; Indio; Riverside; Colton; Pacific Grove Station; Del Monte Station; Tracy and Stockton; to the Atchison Topeka and Santa Fe Railway Company for supplies taken from Bakersfield and San Bernardino; to the Boca and Loyalton Railway Company for its supply at Boca; to the Butte County Railroad Company for the water and ice used by that company; and to the Southern Pacific Company for the ice secured at the West Oakland supply house and at Stockton.

A report was received from Dr. W. J. Blevins, County Health Officer of Yolo County, upon an investigation made, at the direction of the Secretary of this Board, of the dining-room, food, etc., at the State Farm at Davis. Dr. Blevins reports that the sanitary conditions are good, the food of excellent quality, and that a few minor irregularities have been corrected.

The president of the State Normal School at Chico requested that the Board make an analysis of water taken from a well which is used as the school supply. Dr. Sawyer was instructed to make the necessary analysis.

Juan Rivera, a leper, who escaped from Los Angeles County in April and who has since roamed over the state, reached Fresno, November 5th, where he appeared at the county hospital demanding food and tobacco. The County Health Officer was instructed to confine the man under section 2952 of the Penal Code. Meanwhile, the Fresno County board of supervisors is endeavoring to have him returned to Los Angeles County under the provisions on page 656, acts of 1901.

Two more cases of smallpox appeared at Holtville, where there was considerable opposition to the enforcement of the Vaccination Act during October. The school trustees decided to comply with the exclusion provisions of the law, but so as to conserve school funds, the appropriations being based upon daily attendance, the schools were closed for two weeks.

The diphtheria epidemic at Petaluma, where thirty-three cases occurred, has subsided; the motion picture houses, schools, etc., being allowed to open. Cultures from several cases still show positive, however, and the Board's regulations for the control of diphtheria are strictly enforced.

The city of Reedley has been instructed to submit plans for a sand filtration plant for its Imhoff effluent.

A formal invitation has been extended to the American Public Health Association to meet in San Francisco in 1915.

The Secretary has written President C. C. Moore, of the Panama-Pacific Exposition, requesting that an early date be set for a conference with regard to considering the exhibit of the Board.

The city of Hanford has been notified that at the meeting of the Board on December 5, 1914, it will be granted a hearing in the matter of its protest against the city of Reedley disposing of its sewage into Kings River.

A letter was received from Dr. A. F. Gillihan, director of the Health Department of Oakland, relative to the possibility of requiring school children to present some evidence of birth registration. The matter was referred to the Attorney of this Board and his opinion is that the Oakland City Council might pass an ordinance authorizing the Board of Education to require birth certificates as evidence of the age of pupils seeking admission to schools, but also that the most satisfactory way to cover this question would be through a new state law. Dr. Gillihan has been furnished with a copy of the Attorney's opinion, No. 186.

Reports of diphtheria and cases of sore throat, supposed to be diphtheria, caused the adoption of vigorous measures at Grass Valley. It developed that bacteriological examinations of cultures from the throats of suspected cases were not being made and instructions were given the health officer to conform to the Board's rule for the control of diphtheria. It was learned that at Bakersfield, also, such examinations were not being made. The health officer of that city was similarly instructed with the result that diphtheria rules are now observed in both cities.

Churches, schools, theaters and the public library at Upland were closed by the local board of health because of the presence of twelve cases of scarlet fever.

Two cases of rabies in dogs have appeared at Red Bluff recently, and Dr. F. J. Bailey, city health officer, has been asked to investigate in order to learn if it may be necessary for the State Board of Health to quarantine under chapter 369, acts of 1913.

REPORT OF THE BUREAU OF VITAL STATISTICS.

GEORGE D. LESLIE, Director.

L. V. BOYLE, Births, Deaths, Marriages.

G. P. JONES, Morbidity Returns.

Births, Deaths and Marriages for October.*

State Totals and Annual Rates.—The following table shows for California as a whole the birth, death and marriage totals for the current and preceding months in comparison with those for the corresponding months of last year, as well as the annual rates per 1,000 population represented by the totals for the current and preceding months. The rates are based on an estimated midyear population of 2,763,109 for California in 1914, the estimate having been made by the Census Bureau method with slight modifications.

Birth, Death and Marriage Totals, with Annual Rates per 1,000 Population, for Current and Preceding Months, for California: October.

Month	Monthly total		Annual rate per 1,000 population: 1914
	1914	1913	
October—			
Births -----	3,838	3,922	16.4
Deaths -----	2,915	3,085	12.4
Marriages -----	2,757	2,913	11.7
September—			
Births -----	4,041	3,773	17.8
Deaths -----	2,804	2,788	12.3
Marriages -----	2,826	2,831	12.4

The birth, death and marriage totals for October were each somewhat less in 1914 than in 1913, the decrease for this year as compared with last year being smaller, however, for births than for either deaths or marriages.

Moreover, the birth registration for October exceeded the death total by no less than 923, or 31.7 per cent.

As to deaths, it may be noted that of the 2,915 decedents in October some 101, or 3.5 per cent, had resided in California less than one year.

County Totals.—The first table which follows below shows the monthly birth, death and marriage totals for the principal counties of the State, the list being limited to counties having a population of at least 25,000 according to the Federal Census of 1910. Totals are also shown for San Francisco and the other bay counties (Alameda, Contra Costa, Marin and San Mateo), as well as for Los Angeles and Orange counties together.

City Totals.—The second of the following tables gives the birth and death totals for the principal freeholders' charter cities, the list including all chartered cities with a census population of at least 15,000 in 1910. Totals are given likewise for San Francisco in comparison with Oakland, Alameda and Berkeley, the three cities adjoining one another on the east shore of San Francisco Bay, as well as for Los Angeles in comparison with neighboring chartered cities (Long Beach, Pasadena, Pomona, and Santa Monica).

*NOTE.—The present report is for the month preceding, but one. This order must be followed hereafter, because of the publication of the Bulletin during the early part of the month, before the tabulation of records for the preceding month is completed.

DEPARTMENT REPORTS—BUREAU OF VITAL STATISTICS. 127

Birth, Death and Marriage Totals, for Principal Counties, October.

County	October, 1914		
	Births	Deaths	Marriages
California -----	2,918	2,757	
Counties of more than 25,000 population (1910):			
Alameda -----	405	279	256
Butte -----	41	22	12
Contra Costa -----	35	28	17
Fresno -----	149	93	63
Humboldt -----	63	40	25
Kern -----	44	37	36
Los Angeles -----	961	715	680
Marin -----	11	9	49
Orange -----	97	49	123
Riverside -----	57	24	32
Sacramento -----	133	95	108
San Bernardino -----	92	68	60
San Diego -----	136	115	98
San Francisco -----	676	541	533
San Joaquin -----	63	92	75
San Mateo -----	52	25	29
Santa Barbara -----	34	25	31
Santa Clara -----	130	127	89
Santa Cruz -----	31	26	24
Solano -----	23	24	17
Sonoma -----	76	44	45
Tulare -----	66	34	28
Selected groups:			
San Francisco and other bay counties -----	1,179	882	884
Los Angeles and Orange counties -----	1,058	764	803

Birth and Death Totals, for Principal Cities: October.

City	October, 1914	
	Births	Deaths
Freeholders' charter cities -----	2,429	1,744
Cities of more than 15,000 population (1910):		
Alameda -----	36	24
Berkeley -----	63	34
Fresno -----	64	29
Long Beach -----	39	24
Los Angeles -----	654	427
Oakland -----	270	161
Pasadena -----	47	36
Riverside -----	27	10
Sacramento -----	102	82
San Diego -----	115	79
San Francisco -----	676	541
San Jose -----	61	39
Stockton -----	28	56
Selected groups:		
San Francisco -----	676	541
Oakland, Alameda and Berkeley -----	369	219
Total, bay cities -----	1,045	760
Los Angeles -----	654	427
Neighboring cities -----	109	96
Totals -----	763	523

Cause of Death.—The following table shows the classification of deaths in California for the current month, in comparison with the preceding month:

Deaths from Certain Principal Causes, with Proportion per 1,000 Total Deaths, for Current and Preceding Months, for California: October.

Cause of death	Deaths: October	Proportion per 1,000	
		October	September
All causes -----	2,915	1,000.0	1,000.0
Typhoid fever -----	24	8.2	12.5
Malarial fever -----	7	2.4	4.3
Measles -----	11	3.8	1.4
Scarlet fever -----	5	1.7	1.4
Whooping-cough -----	16	5.5	7.1
Diphtheria and croup -----	34	11.7	10.0
Influenza -----	8	2.7	2.9
Other epidemic diseases -----	11	3.8	1.8
Tuberculosis of lungs -----	336	115.3	108.8
Tuberculosis of other organs -----	57	19.5	19.6
Cancer -----	213	73.1	77.7
Other general diseases -----	113	38.8	37.8
Meningitis -----	24	8.2	6.1
Other diseases of nervous system -----	246	84.4	87.4
Diseases of circulatory system -----	516	177.0	172.2
Pneumonia and broncho-pneumonia -----	170	58.3	59.2
Other diseases of respiratory system -----	54	18.5	23.2
Diarrhea and enteritis, under 2 years -----	115	39.5	21.4
Diarrhea and enteritis, 2 years and over -----	37	12.7	8.9
Other diseases of digestive system -----	155	53.2	52.8
Bright's disease and nephritis -----	191	65.5	68.1
Childbirth -----	25	8.6	13.9
Diseases of early infancy -----	126	43.2	34.2
Suicide -----	66	22.6	30.7
Other violence -----	242	83.0	91.3
All other causes -----	113	38.8	45.3

In October there were 516 deaths, or 17.7 per cent of all, from diseases of the circulatory system, and 393, or 13.9 per cent, from various forms of tuberculosis, heart disease thus leading tuberculosis greatly.

Other notable causes of death in October were: Violence, 308; diseases of the digestive system, 307; diseases of nervous system, 270; diseases of respiratory system, 224; cancer, 213; Bright's disease and nephritis, 191; and epidemic diseases, 116.

The deaths from epidemic diseases were as follows: Diphtheria and croup, 34; typhoid fever, 24; whooping-cough, 16; measles, 11; influenza, 8; malarial fever, 7; scarlet fever, 5; and all other epidemic diseases, 11.

The deaths from the three leading epidemic diseases reported for the month were distributed by counties as follows:

Diphtheria and croup		Typhoid fever		Whooping-cough	
Alameda	3	Colusa	1	Alameda	3
Contra Costa	1	Humboldt	3	Humboldt	1
Fresno	2	Kern	1	Kings	1
Kern	4	Los Angeles	1	Los Angeles	1
Los Angeles	7	Monterey	1	Mendocino	1
Marin	1	Napa	1	Orange	1
Napa	2	Orange	5	San Benito	1
San Bernardino	1	Sacramento	1	San Diego	1
San Francisco	13	San Bernardino	1	San Francisco	4
Total	34	San Diego	1	San Mateo	1
		San Francisco	2	Santa Cruz	1
		San Joaquin	2	Total	16
		San Luis Obispo	1		
		Santa Barbara	1		
		Santa Clara	1		
		Solano	1		
		Total	24		

Geographic Divisions.—The following table presents data for geographic divisions, including the metropolitan area, or San Francisco and the other bay counties (Alameda, Contra Costa, Marin, and San Mateo), in comparison with the rural counties of Northern and Central California:

Deaths from Main Classes of Diseases, for Geographic Divisions: October.

Geographic division	Deaths: October										
	All causes	Epidemic diseases	Tuberculosis (all forms)	Cancer	Diseases of nervous system	Diseases of circulatory system	Diseases of respiratory system	Diseases of digestive system	Bright's disease and nephritis	Violence	All other causes
The State	2,915	116	393	213	270	516	224	307	191	308	377
Northern California	300	20	28	23	32	43	32	23	17	30	52
Coast counties	159	13	15	13	22	22	14	10	11	10	29
Interior counties	141	7	13	10	10	21	18	13	6	20	23
Central California	1,584	67	176	118	142	306	127	172	94	185	197
San Francisco	541	27	57	43	34	126	38	59	35	63	59
Other bay counties	341	13	35	29	32	60	30	35	23	35	49
Coast counties	215	7	20	21	27	53	13	22	7	20	25
Interior counties	487	20	64	25	49	67	46	56	29	67	64
Southern California	1,031	29	189	72	96	167	65	112	80	93	128
Los Angeles	715	17	133	50	57	130	45	79	60	57	87
Other counties	316	12	56	22	39	37	20	33	20	36	41
Northern and Central California	1,884	87	204	141	174	349	159	195	111	215	249
Metropolitan area	882	40	92	72	66	186	68	94	58	98	108
Rural counties	1,002	47	112	69	108	163	91	101	53	117	141

Sex, Race and Nativity.—The proportion of the sexes among the 2,915 decedents in October was: Male, 1,782, or 61.1 per cent; and female, 1,133, or 38.9 per cent.

The race distribution of decedents was: White, 2,760, or 94.7 per cent of all; Japanese, 54; Chinese, 52; negro, 35, and Indian, 14.

The 2,760 white decedents were classified by nativity as follows: California, 762, or 27.6 per cent; other states, 1,072, or 38.8 per cent; foreign countries, 853, or 30.9 per cent; and unknown, 73, or 2.7 per cent.

Sex and Age Periods.—The following table shows the age distribution, by numbers and per cents of deaths, classified by sex:

Deaths Classified by Sex and Age Periods, with Per Cent by Age Periods, for California: October.

Age period	Deaths			Per cent		
	Total	Male	Female	Total	Male	Female
All ages -----	2,915	1,782	1,133	100.0	100.0	100.0
Under 1 year -----	355	199	156	12.2	11.2	13.8
1 to 4 years -----	144	76	68	4.9	4.3	6.0
5 to 9 years -----	51	25	26	1.7	1.4	2.3
10 to 19 years -----	75	33	42	2.6	1.8	3.7
20 to 29 years -----	273	169	104	9.4	9.5	9.2
30 to 39 years -----	257	164	93	8.8	9.2	8.2
40 to 49 years -----	331	219	112	11.3	12.3	9.9
50 to 59 years -----	346	216	130	11.9	12.1	11.5
60 to 69 years -----	405	264	141	13.9	14.8	12.4
70 years and over -----	678	417	261	23.3	23.4	23.0

This table shows relatively more females than males died at the early age periods under 20 years, while relatively more males than females died at the later age periods of 20 years and over.

Length of Residence.—The table below gives the number, and per cent of decedents classified by length of residence in California:

Deaths Classified by Length of Residence in the State, with Per Cents, for California: October.

Length of residence	Deaths	Per cent
Total -----	2,915	100.0
Under 1 year -----	101	3.5
1 to 9 years -----	573	19.7
10 years and over -----	1,138	39.0
Life -----	822	28.2
Unknown -----	281	9.6

It appears from this table that 3.5 per cent of all decedents had resided in California less than one year, and altogether 23.2 per cent had lived in the State under ten years. Residents of ten years' standing comprised 39.0 per cent of all decedents, and native Californians who had been here for life comprised 28.2 per cent, the length of residence being unknown for 9.6 per cent of all decedents.

MORBIDITY REPORTS.

Smallpox.

A smaller number of cases of smallpox was reported during November than for any one month during the past several years. There were eleven cases, four of which were in San Diego County, three in Riverside County, two in San Joaquin County and one each in Imperial

and Stanislaus counties. Nine of these patients had never been vaccinated successfully, and for the remaining two, vaccination histories were not obtained.

Typhoid Fever.

The number of cases of typhoid fever showed considerable decrease during November, as there were but 114 cases reported, while 173 cases were reported during October. San Francisco reported 19 and Los Angeles 13 cases. Seven cases were reported in Sacramento and 5 cases occurred in Santa Rosa. The only outbreak of any importance was on a dairy ranch near Tomales, where 12 cases occurred in a single family.

Poliomyelitis.

Poliomyelitis also showed a decrease during November, as there were but two cases reported, one in Marin County and the other in Tulare County. There has been an unusually small number of cases of this disease during the present year.

Epidemic Cerebrospinal Meningitis.

Five cases of this disease were reported. Two were in Los Angeles, two in San Francisco and one in Imperial County.

Scarlet Fever.

About the same number of cases of scarlet fever occurred during November as during October, the numbers being 336 for October and 334 for November.

Diphtheria.

Diphtheria is on the increase as there were 417 cases reported during November, while there were but 345 cases reported during October. Health officers have been instructed to enforce the State Board of Health's regulations for the control of diphtheria in a rigid manner. In all cases swabs must be submitted to the State Hygienic Laboratory or to one of its branches, for bacteriological examination.

Measles.

Eight hundred and twenty cases of measles were reported during the month, this being a considerable decrease from October when 1,085 cases were reported.

Dysentery.

Two cases of dysentery were reported.

Chickenpox.

Three hundred and two cases of chickenpox were reported, against 257 during October. This increase is normal.

Erysipelas.

Seventeen cases of erysipelas were reported, all of which were well scattered over the State.

Gonococcus Infection.

Fifty-one cases of gonococcus infection were reported during November.

Malaria.

Thirty-four cases of malaria were reported during November, a slight decrease from October, when forty cases were reported. Health officers are not reporting malaria as well as might be desired.

Mumps.

Twenty-three cases of mumps were reported.

Pellagra.

There was but one case of pellagra reported during November. Acting upon instructions from the State Board of Health, both city and county health officers have been on the watch for cases of this disease, as morbidity and mortality records would indicate that there has been a considerable increase recently in the number of cases of pellagra in California.

Pneumonia.

Eighty-seven cases of pneumonia were reported, which is about normal.

Whooping-cough.

Sixty-seven cases of this disease were reported, which is about the same number as was reported during October.

Syphilis.

Twenty-one cases of syphilis were reported, which is a slight decrease from previous months.

Tetanus.

One case of tetanus was reported during November.

Trachoma.

There were but seven cases of trachoma reported.

Tuberculosis.

Four hundred and sixty cases of tuberculosis were reported during November, which is a decrease from October, when 549 cases were reported. Physicians and health officers are manifesting an interest in securing these reports, however. There has been a marked increase during the past few months in the number of cases reported.

Smallpox.*Distribution of Cases reported during November, 1914.*

Counties and cities	Number new cases reported during month	Deaths	Vaccination history of cases			
			Number vaccinated within seven years preceding attack	Number last vaccinated more than seven year preceding attack	Number never successfully vaccinated	Vaccination history not obtained or uncertain
Imperial County -----	1	-----	-----	-----	1	-----
Riverside County -----	1	-----	-----	-----	1	-----
Corona -----	2	-----	-----	-----	2	-----
San Diego County -----	1	-----	-----	-----	-----	1
San Diego -----	3	-----	-----	-----	3	-----
San Joaquin County -----	-----	-----	-----	-----	-----	1
Stockton -----	2	-----	-----	-----	2	-----
Stanislaus County -----	1	-----	-----	-----	-----	-----
Totals -----	11	-----	-----	-----	9	2

Typhoid Fever.*Distribution of Cases reported during November, 1914.*

Counties and cities	Number of new cases reported during month	Counties and cities	Number of new cases reported during month
Alameda County -----		Orange County -----	3
Alameda -----	1	Sacramento County -----	
Hayward -----	3	Sacramento -----	7
Oakland -----	6	San Bernardino County -----	3
Butte County -----	1	Ontario -----	1
Colusa County -----	4	San Diego County -----	
Fresno County -----		National City -----	1
Fowler -----	1	San Francisco -----	19
Fresno -----	2	San Joaquin County -----	
Imperial County -----	1	Stockton -----	4
Kern County -----	1	San Luis Obispo County -----	
Kings County -----		San Luis Obispo -----	1
Lemoore -----	1	Santa Clara County -----	2
Los Angeles County -----	7	Sonoma County -----	2
Alhambra -----	1	Healdsburg -----	2
Azusa -----	2	Santa Rosa -----	5
Long Beach -----	4	Stanislaus County -----	3
Los Angeles -----	13	Sutter County -----	1
San Gabriel -----	1	Tehama County -----	
Santa Monica -----	1	Corning -----	1
Watts -----	2	Tulare County -----	1
Madera County -----		Dinuba -----	3
Madera -----	1	Yolo County -----	1
Modoc County -----			
Alturas -----	1	Total -----	114

Epidemic Cerebrospinal Meningitis.*Distribution of Cases reported during November, 1914.*

Counties and cities	Number of new cases reported
Imperial County -----	1
Los Angeles County -----	
Los Angeles -----	2
San Francisco County -----	2
Total -----	5

Poliomyelitis (Infantile Paralysis).*Distribution of Cases reported during November, 1914.*

Counties and cities	Number of new cases reported during month
Marin County -----	1
Tulare County -----	1
Total -----	2

Scarlet Fever, Measles, Diphtheria, Dysentery and Other Diseases.

Reported during October, 1914.

Disease	Total number of new cases reported during the month in the entire State
Scarlet fever	334
Measles	820
Diphtheria	417
Dysentery	2
Chickenpox	302
Erysipelas	17
German measles	3
Gonococcus infection	51
Hookworm	1
Malaria	34
Mumps	23
Pellagra	1
Pneumonia	87
Syphilis	21
Tetanus	1
Trachoma	7
Tuberculosis	460
Whooping-cough	67

REPORT OF THE BUREAU OF FOODS AND DRUGS FOR
NOVEMBER, 1914.

M. E. JAFFA, Director.

It is encouraging to report that the examination of drugs shows a marked improvement in the quality of samples tested. This is especially true of sweet spirits of nitre and aromatic spirits of ammonia.

The samples submitted for examination and analysis during the month of November, number nearly two hundred. Of these one hundred and thirteen were what are termed "official" samples, the remaining being submitted by state institutions, etc.

It is to be regretted that there is still to be found on the market, samples of green peas colored with copper sulfate. The sale of this food product so colored has been prohibited, by a ruling of the United States Department of Agriculture, for over a year, and it is to be hoped that inspectors will not be able to find any more in future visits.

No special mention is required concerning any one article of food examined during the month, as the routine work embraced almost every article of food used.

The unofficial samples include a large number of teas, as submitted by the different state hospitals. It is very encouraging to report that so far as examinations have proceeded, the delivery samples have been found to be fully equal to samples which were submitted at the time the original bid was made.

No Food Inspection Decisions have been received from the United States Department of Agriculture. This Bureau, however, is in receipt of information from the Bureau of Chemistry, Department of Agriculture, to the effect that

"In view of the fact that alum appears to be almost universally used in the preparation of pickles, and may therefore be considered a common ingredient of such products, no declaration of its presence is required by this Department upon the label when used in small amounts, though various states require its declaration."

Any excess of alum, however, will be considered as an unnecessary and undesirable ingredient, and pickles containing such will be considered as objectionable in the eye of the law.

The following list of Notices of Judgments from the United States Department of Agriculture, have come to hand:

Apples, Misbranding of. No. 3242.
Bitters, Ferro China, Adulteration of. No. 3320.
Brandy, Vodka, Misbranding of. No. 3300.
Butter, Adulteration and Misbranding of. Nos. 3247, 3248, 3249, 3251, 3252, 3253, 3254, 3255, 3258, 3259, 3260, 3261, 3262, 3268.
Confectionery, Adulteration and Misbranding of. Nos. 3287, 3310.
Gantharides, Russian, Adulteration and Misbranding of. No. 3273.
Cheese, Adulteration of. No. 3326.
Cider, Adulteration and Misbranding of. Nos. 3274, 3277, 3283.
Coffee, Misbranding of. No. 3311.
Colors, Adulteration of. Nos. 3293, 3308.
Cream, Adulteration and Misbranding of. Nos. 3257, 3266, 3267, 3312, 3313, 3330.
Dandelion root, Adulteration and Misbranding of. No. 3244.
Extracts, Adulteration and Misbranding of. Nos. 3276, 3307.

- Feed Meal, Cottonseed, Adulteration and Misbranding of. Nos. 3245, 3265, 3270, 3306.
- Fish, Sardines, Adulteration of. No. 3279.
- Fruit Pudding, Misbranding of. No. 3329.
- Grape Juice, Adulteration and Misbranding of. Nos. 3271, 3299.
- Ice Cream, Adulteration of. No. 3316.
- Jam, Adulteration and Misbranding of. No. 3296.
- Macaroni Product, Misbranding of. No. 3243.
- Macaroons, Adulteration and Misbranding of. No. 3275.
- Milk, Adulteration of. Nos. 3256, 3263, 3264, 3269, 3325, 3331.
- Milk, Dried, Adulteration and Misbranding of. No. 3280.
- Molasses, Misbranding of. No. 3314.
- Oils, Adulteration and Misbranding of.
- Birch, No. 3322.
 - Cinnamon, No. 3288.
 - Cottonseed, No. 3281.
 - Olive, No. 3281.
 - Peanut Oil, No. 3327.
 - Wintergreen, No. 3323.
 - Oils and Extracts, No. 3328.
- Oysters, Adulteration and Misbranding of. Nos. 3246, 3284, 3285, 3286, 3289, 3295, 3298, 3301, 3302, 3304, 3305.
- Preserves, Adulteration and Misbranding of. Nos. 3278, 3292.
- Salad Dressing, Adulteration and Misbranding of. No. 3294.
- Sorghum Composition, Misbranding of. No. 3317.
- Stock Feed, Adulteration and Misbranding of. No. 3318.
- Sugar Butter, Adulteration and Misbranding of. No. 3290.
- Sugar Wafers, Adulteration of. No. 3321.
- Tomato, Adulteration and Misbranding of.
- Ketchup, Nos. 3250, 3282, 3324.
 - Pulp, No. 3319.
- Vinegar, Adulteration and Misbranding of. Nos. 3272, 3297, 3309, 3315.
- Wines, Adulteration and Misbranding of. Nos. 3271, 3291, 3299, 3303.

REPORT OF THE BUREAU OF THE HYGIENIC LABORATORY FOR NOVEMBER, 1914.

WILBUR A. SAWYER, M.D., Director. J. C. GEIGER, M.D., Chief Bacteriologist.

Announcement regarding the Wassermann Test.

The laboratory has made 327 Wassermann tests for syphilis, with positive results in 87 cases, during the eight months since it added this diagnostic examination to its routine work. The tests were made for physicians whose patients were unable to pay the cost of a reliable laboratory examination elsewhere.

This kind of work has heretofore been available in this laboratory only for state institutions and for patients living in communities of less than 20,000 people. By action of the State Board of Health taken December 5, 1914, this restriction has been removed. Any physician in the State of California can now obtain the Wassermann test at the State Hygienic Laboratory for patients who can not afford to pay the fee charged at private laboratories. Physicians wishing to take advantage of this privilege should write to the State Hygienic Laboratory for a mailing case and directions.

Rabies Decreasing.

Since January the number of animals' heads sent each month to the laboratory for examination has fallen from 60 to 16, and the number showing positive findings, from 48 to 9. For five successive months the number of specimens showing evidence of rabies has been so small, compared to previous experience, that it seems safe to assert that, taking the state as a whole, rabies is now endemic rather than epidemic.

There have been no human deaths from rabies in California since March 25, 1914, while in the twelve months preceding that date there were eight. The height of the epidemic was reached during the same twelve months, in which rabies was found to be present 361 times in 430 laboratory examinations. With the decline in the total number of cases of rabies in dogs there has been a decrease in the number of persons requiring the Pasteur treatment as the result of being bitten by rabid animals.

While rabies has become less prevalent in the greater part of the state, its presence is so widespread that precautions must not be relaxed if the public and domestic animals are to be given reasonable safety.

Division of Biological Examinations.

Summary of Examinations made in the California State Hygienic Laboratory during the month of November, 1914.

Condition suspected	Positive	Negative	Inconclusive	Total
Main Laboratory at Berkeley:				
Anthrax -----	1	11		12
Diphtheria -----	82	120	5	207
Gonococcus infection -----	1	1	1	3
Malaria -----		5		5
Rabies -----	9	6	1	16
Syphilis -----	2	36	3	41
Tuberculosis -----	6	33		39
Typhoid (Widals) -----	5	24		29
Typhoid (blood cultures) -----		3		3
Water pollution -----	27	6	2	35
Miscellaneous -----	6	1		7
				397
Northern Branch at Sacramento:				
Diphtheria -----	9	34		43
Gonococcus infection -----		1		1
Malaria -----	2	2		4
Tuberculosis -----	2	7		9
Typhoid -----	6	9	1	16
				73
San Joaquin Valley Branch at Fresno:				
Diphtheria -----	17	45		62
Malaria -----		1		1
Tuberculosis -----		1		1
Typhoid -----	1	1		2
				66
Southern Branch at Los Angeles:				
Diphtheria -----	53	175	9	237
Gonococcus infection -----	1	13	1	15
Tuberculosis -----		7		7
Typhoid -----	2	15		17
				276
Total number of examinations -----				812

Division of Preventive Therapeutics.

Pasteur Treatment for the Prevention of Rabies by the State Hygienic Laboratory during the month of November, 1914.

	Treatment commenced	Treatment completed
Main Laboratory at Berkeley -----	4	2
Northern Branch at Sacramento -----	0	0
San Joaquin Valley Branch at Fresno -----	4	0
Southern Branch at Los Angeles -----	0	0
Laboratory at Sacramento Board of Health, by deputized bacteriologist -----	0	0
Laboratory of San Francisco Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Los Angeles Board of Health, by deputized bacteriologist -----	0	2
Laboratory of San Diego City Board of Health, by deputized bacteriologist -----	0	0
Laboratory of Letterman General Hospital, Presidio, by deputized bacteriologist -----	0	0
Laboratory of United States Naval Hospital, Mare Island, by deputized bacteriologist -----	0	0
Totals -----	8	4

Vaccine for the Prevention of Typhoid Fever issued by the State Hygienic Laboratory during the month of November, 1914.

Number of physicians to whom vaccine was sent.....	14
Number of complete treatments sent.....	498

Public Health Instruction.

Participation in Instruction in Public Health during November, 1914.

Main Laboratory at Berkeley:

Bacteriological instruction outfits sent out.....	1
Bacteriological instruction outfits in use.....	30
Lectures or talks by the Director.....	4
Lectures or talks by the Chief Bacteriologist.....	1

Division of Epidemiological Investigations.

Epidemiological Investigations during November, 1914.

Main Laboratory at Berkeley:

Special investigations by the Director.....	2
Investigation of sanitary conditions and suspected scarlet fever in Good Templars' Home, near Vallejo.	
Investigation of a case suspected of being Verruga Peruviana.	

REPORT OF THE BUREAU OF TUBERCULOSIS FOR NOVEMBER, 1914.

BURT F. HOWARD, M.D., Director.

The tuberculosis problem of California when compared with that of other states of the Union, is one of the most difficult, the death rate from tuberculosis being greater in but two other states.

Foremost among the causes for this fact is probably the reputation of its climate, for the popular conception of California as a health resort is responsible for the immigration of a large proportion of those who come here only to die of tuberculosis within a few months or years.

We must not, however, lose sight of the fact that more than one half of the deaths from this cause are either those of natives of California or of persons who have lived here over ten years; and that over fifteen hundred native Californians died of tuberculosis last year. Hence it is evident that if control is possible, we should adopt measures to this end as a matter of self protection.

From the standpoint of state control of tuberculosis, California offers peculiar difficulties because of its vast extent of territory and the very uneven distribution of the tuberculous population, the problem being largely local if we except the above mentioned factor of immigration, and even this is influenced by local conditions and activities. Migration within the state, however, and the general problems of immigration are essentially beyond the domain of local control.

One state after another is gradually assuming its share of work in the tuberculosis campaign, and California can not well afford to neglect the opportunity which the present time offers for the institution of appropriate measures before the difficulties to be met are greatly increased by the expected influx of population incident to the opening of the Panama Canal with the consequent growth or crowding of her cities.

Much of the work of the Bureau this month has been in the preparation of plans for meeting the most apparent demands of the present situation.

There have been no recent inspections owing to the lack of funds for this purpose, however, as the accommodations for the tuberculous, thus far inspected in our county hospitals, have been found to fall far short of the demand numerically, and frequently below a reasonable standard in other respects, various plans have been considered whereby our county hospitals might be improved. Tuberculosis work in other states has demonstrated that all plans with this object in view are largely educational in effect, for first, the public must be shown the need and then how best to meet it.

The work of the visiting nurse trained especially to deal with tuberculosis along with her other work is of paramount importance in revealing the existence of the need. Rural nursing established by individual communities under the inspiration and supervision of a state visiting nurse has been proposed as being a plan successful elsewhere. Next perhaps comes the object lesson of the treated case revealing the fact that tuberculosis, in its early stages, is a disease and not laziness, that it is preventable and curable. For such object lessons multiplied many times we must have good sanatoria or hospitals, distributed in such a way that they are accessible to all, and they must be made attractive and free from opprobrium so that the community may be benefited by the removal of all possible sources of infection, the early as well as the late cases.

This ideal can probably be attained only when the public demand county sanatoria independent of county institutions reserved for indigent persons, but as a step in the right direction various methods for improving county hospitals have been considered, and it is hoped that one of these plans may be successful in attaining the desired end.

The establishment of state hospitals for treating tuberculosis might accomplish these same ends if they could be sufficiently numerous, but without more definite knowledge than we now possess of the number of cases to be treated it would be impossible to estimate what number of hospitals would be demanded. Certainly one good hospital of an inexpensive type in each county would do more toward attaining the above mentioned results than would one or two more elaborate institutions remote from the homes of the patients.

Whatever may be the advantage of state sanatoria, we undoubtedly need to have local hospitals for the care of advanced cases not otherwise provided for, and it is for this reason that we are turning our attention first to the county hospitals.

There were 524 cases of tuberculosis of all forms, with the names and addresses of the individuals, reported during October of this year, as compared to 510 in September of this year, and 410 in October, 1913.

Data in tuberculosis cases reported during October:

Number of cases.....	401	Length of residence in California:	
Under 5 years.....	8	Under 1 year.....	40
5 to 14.....	10	1 year.....	15
15 to 24.....	64	2 years.....	35
25 to 34.....	127	3 years.....	21
35 to 44.....	81	4 years.....	16
45 and over.....	91	5 years.....	13
Unknown.....	20	6 years.....	13
Sex:		7 years.....	14
Male.....	246	8 years.....	17
Female.....	149	9 years.....	9
Unknown.....	6	10 years.....	17
Dwelling:		10 to 20 years.....	51
Detached.....	124	Over 20 years.....	65
Flat.....	13	Unknown.....	75
Tenement.....	3	Number of persons in family:	
Boarding.....	27	Families of one.....	16
Hotel.....	28	Families of two.....	38
Hospital.....	65	Families of three.....	33
Other.....	25	Families from 4 to 11.....	76
Unknown.....	116	(Average, 6.)	
Housing:		Tuberculosis in family:	
Good.....	161	Father.....	21
Fair.....	77	Mother.....	30
Poor.....	29	Sister.....	16
Unknown.....	134	Brother.....	14
Financial condition:		Husband.....	4
Independent.....	29	Wife.....	3
Wage-earner.....	103	Children.....	2
Indigent.....	114	Others.....	10
Unknown.....	155	Bacteriological examination:	
Occupational condition:		Tubercle bacilli positive.....	184
Good.....	61	Tubercle bacilli negative.....	41
Fair.....	53	Not stated.....	176
Poor.....	21	Prognosis:	
Unknown.....	266	Good.....	84
Nativity:		Bad.....	121
California.....	58	Not stated.....	173
Elsewhere in United States.....	153	Doubtful.....	23
Foreign.....	153	Type:	
Unknown.....	37	Tuberculosis of lungs.....	379
Race or color:		Tuberculosis of other organs.....	41
White.....	328	Duplicated.....	19
Negro.....	7	Cases reported with data.....	401
Indian.....	1	Without above data.....	148
Chinese.....	4	Total cases.....	549
Japanese.....	11	Reported at time of death or later.....	25
Unknown.....	50	Total living cases.....	524

REPORT OF THE BUREAU OF REGISTRATION OF NURSES FOR NOVEMBER, 1914.

ANNA C. JAMME, R.N., Director.

During the regular monthly meeting of the Board held December 5th the first examination of graduate nurses under the provisions of chapter 319, statutes of 1913, was held in the Assembly Chamber of the State Capitol, the Board remaining in session until the completion of the examination. Forty-six applicants took this examination. Of these all were graduates of accredited training schools for nurses located in California with the exception of two, one of whom was a graduate of an accredited training school in Georgia and the other of an accredited training school in Michigan.

The following examination questions were selected from a list of questions submitted by the superintendents of the training schools as given to their pupils during the past year and were approved by the Board at the regular meeting in November.

Anatomy and Physiology.

1. Into what four classes are bones divided?
2. Give the name and function of the outer covering of the bone.
3. Name the bones entering into the formation of the chest.
4. Of what does the digestive apparatus consist?
5. Name the organs of circulation.
6. Describe the blood.
7. Name the respiratory organs.
8. Name the important excretory organs.

Hygiene and Bacteriology.

1. What are the principal factors in maintaining health?
2. What do you understand by ventilation?
3. Show how a nurse may be a carrier of infection from one patient to another.
4. Why are flies a menace to health? Why are mosquitoes a menace to health?
5. What are the conditions most favorable for the growth of bacteria?
6. Name three of the most common pus-producing organisms.
7. What precautions would you take in the care of a typhoid patient to protect yourself and others from infection?
8. In what discharges are the following bacteria most frequently found:
 - Tubercle bacilli.
 - Typhoid bacilli.
 - Diphtheria bacilli.

Materia Medica.

1. Name five ways of introducing medicine into the system.
2. By which method would you obtain the slowest action; the quickest action?

3. Give the average dose of the following for an adult:

Morphine sulphate.

Paregoric.

Strychnia.

4. Give symptoms and treatment of opium poisoning.
5. Define hypnotic, diuretic, diaphoretic, and give an example of each.
6. How would you prepare one quart of bichloride solution, 1-1,000?

Dietetics.

1. Name the five food principles and classify them according to their function in the body.
2. Name the chief tissue building foods and the chief heat and force-producing foods.
3. Give one method of pre-digesting milk.
4. What effect does toasting have on the digestibility of bread?
5. What articles of food are especially to be avoided in nephritis?

Urinalysis.

1. Give instructions you think a patient should have before collecting a sample of urine for analysis.
2. What would you expect to find in making an analysis in a case of Bright's disease?
3. Give the characteristics of diabetic urine.
4. Give two tests for albumin.

Contagion and Children's Diseases.

1. Give the nursing care of a child with rickets.
2. What is thrush?
What would you do to prevent it?
3. Name important adverse symptoms to be carefully watched for in scarlet fever and state significance of each.
4. What would you do for a child in convulsions?

Medical Nursing.

1. What particulars regarding a chill should be noted and recorded?
2. Describe briefly how you would give a bed bath.
3. How would you administer a hypodermic?
4. By what methods do you ascertain the temperature of the body; give detail of procedure.
5. State briefly the nursing care of a case of croupous pneumonia.

Surgical Nursing.

1. How do you prepare a patient for a vaginal examination?
2. How would you distinguish between arterial and venous blood in case of hemorrhage?
3. Give technique of catheterization in the male or in the female.
4. What are the symptoms of shock and what would you do until the arrival of a doctor?
5. What is the general preparation of a patient before giving an anæsthetic?

Obstetrical Nursing.

1. How would you prepare a patient for labor?
2. Describe the stages of labor.
3. What would you do in case of post-partum hemorrhage after the doctor had left?
4. What are the causes and prevention of mastitis?
5. What is ophthalmia neonatorum and how may it be prevented?

Nursing Ethics.

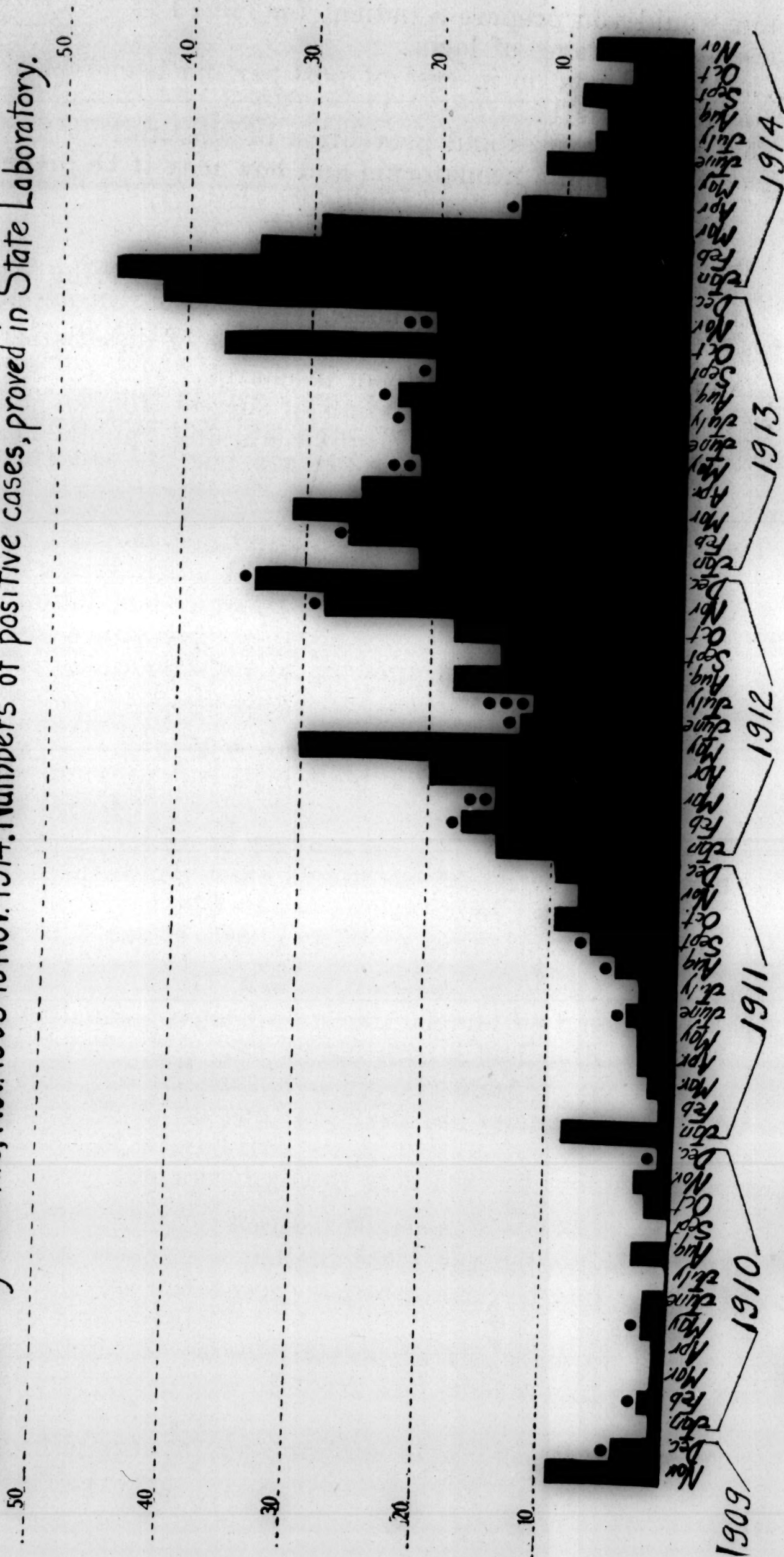
1. Define nursing ethics.
2. Name important ethical duties of a nurse entering on the care of a patient in a private home.
3. What attitude should a nurse take in case of dissatisfaction of the family towards the physician in charge.
4. Discuss briefly the essential points of success from an ethical standpoint in private nursing; hospital nursing; public health work.

RABIES

IN

CALIFORNIA

Prevalence by months, Nov. 1909 to Nov. 1914. Numbers of positive cases, proved in State Laboratory.



• Human Death

FIVE YEARS OF RABIES IN CALIFORNIA.

A Few Specially Significant Facts.

Although the first known case of rabies in California occurred in 1899, it was not until 1909 that the disease assumed a definite standing among the communicable diseases prevalent in this state. Since 1909 rabies has appeared in every section of California except the northern coast counties and the mountain counties and in some few scattered counties having low populations.

Hundreds of positive cases in animals have been proved at the State Hygienic Laboratory, as indicated in the accompanying chart. There have also been many hundreds of cases that have been proved in municipal laboratories and there have undoubtedly been hundreds of cases that have never come to the attention of the authorities.

Since November of 1909, there have been twenty-five human deaths from this disease. There is no record of any human being having recovered, who showed even the first symptoms of rabies.

Contrary to popular opinion, the disease seems to be more prevalent in the winter months than in the summer months. In so far as rabies is concerned in California, the term "dog days" is a misnomer.

It should be noted in the accompanying chart, that an epidemic rises to its maximum stage very quickly and subsides with equal rapidity. It should also be noted that human deaths inevitably follow an epidemic among animals. It should also be noted that following an epidemic there always appears a recrudescence. This is characteristic of many acute infectious diseases.

The greatest number of cases was discovered during the autumn of 1913. Since then the disease has gradually declined until at the present time the number of cases occurring is merely nominal. The years of 1912 and 1913 produced the greatest number of cases.

Specially significant outbreaks have occurred in Los Angeles, San Francisco, Oakland, Santa Clara County, Sonoma County, San Joaquin Valley and Sacramento Valley, although other sections have had to face perplexing problems in checking the disease.

Dr. W. A. Sawyer, director of the State Hygienic Laboratory and Dr. J. C. Geiger, chief bacteriologist, have done specially significant work in epidemiological investigations into rabies and in connection with Pasteur treatments. Copies of their reports may be obtained by writing to the State Board of Health at Sacramento.

LIST OF COUNTY AND CITY HEALTH OFFICERS.

Alameda County—
 Dr. C. L. McKown-----Niles
 Alameda-----Dr. A. Hieronymus
 Albany-----Dr. F. R. Woolsey
 Berkeley-----Dr. J. J. Benton
 Emeryville-----Dr. A. T. Drennan
 Hayward-----Dr. F. W. Browning
 Livermore-----Dr. H. G. McGill
 Oakland-----Dr. Allen F. Gillihan
 Piedmont-----George T. Burtchaell
 Pleasanton-----Dr. J. Hal Cope
 San Leandro-----Dr. Luther Michael
 Alpine County—
 Mr. Fred S. Dunlap-----Markleeville
 Amador County—
 Dr. E. E. Endicott-----Jackson
 Jackson-----George Hambric
 Sutter Creek-----W. A. Burres
 Butte County—
 Dr. L. L. Thompson-----Gridley
 Biggs-----Dr. O. C. Hawkins
 Chico-----G. H. Taylor
 Gridley-----Dr. L. L. Thompson
 Oroville-----Dr. W. F. Gates
 Calaveras County—
 Dr. George F. Pache-----Angels Camp
 Angels Camp-----Dr. E. W. Weirich
 Colusa County—
 Dr. C. A. Poage-----Colusa
 Colusa-----Dr. C. A. Poage
 Contra Costa County—
 Dr. W. S. George-----Antioch
 Antioch-----Dr. W. S. George
 Concord-----Dr. F. F. Neff
 Hercules-----Dr. M. L. Fernandez
 Martinez-----Dr. Edwin Merrithew
 Pinole-----Dr. M. L. Fernandez
 Pittsburg-----Dr. F. S. Gregory
 Richmond-----Dr. Chas. R. Blake
 Del Norte County—
 Dr. E. M. Fine-----Crescent City
 Crescent City-----Dr. E. M. Fine
 El Dorado County—
 Dr. L. M. Leisenring-----Placerville
 Placerville-----P. J. Hall
 Fresno County—
 Dr. G. L. Long-----Fresno
 Clovis-----Dr. M. S. McMurtry
 Coalinga-----Dr. C. W. Hutchison
 Fowler-----Dr. C. O. Mitchell
 Fresno-----Dr. L. R. Willson
 Kingsburg-----Dr. J. A. Gillespie
 Reedley-----Dr. J. D. Hare
 Sanger-----Dr. Thos. F. Madden
 Selma-----Dr. O. H. Steinwand
 Glenn County—
 Dr. J. A. Randolph-----Willows
 Orland-----Dr. D. L. Martin
 Willows-----Dr. J. T. Gardner
 Humboldt County—
 Dr. Carl T. Wallace-----Eureka
 Arcata-----Dr. G. W. McKinnon
 Blue Lake-----Dr. O. P. Floreth
 Eureka-----Dr. L. A. Wing
 Ferndale-----Dr. J. A. Lane
 Fortuna-----Dr. Orville Rockwell
 Imperial County—
 Dr. Virgil McCoombs-----El Centro
 Brawley-----Dr. Eugene Le Baron
 Calexico-----Dr. H. C. Richter
 El Centro-----C. L. Longstreth
 Holtville-----J. C. Nale
 Imperial-----Dr. C. E. Standlee
 Inyo County—
 Dr. I. J. Woodin-----Independence
 Bishop-----Dr. C. E. Turner

Kern County—
 Dr. C. A. Morris-----Bakersfield
 Bakersfield-----H. Ferris
 Maricopa-----Dr. H. N. Taylor
 Taft-----Dr. F. C. Galehouse
 Tehachapi-----Dr. N. J. Brown, Jr.
 McKittrick-----
 Kings County—
 Dr. C. L. Scott-----Hanford
 Lemoore-----Dr. W. P. Byron
 Hanford-----Dr. C. L. Scott
 Lake County—
 Dr. W. E. Upton-----Kelseyville
 Kelseyville-----Dr. W. E. Upton
 Lakeport-----J. G. West
 Lassen County—
 Dr. W. E. Dozier-----Susanville
 Susanville-----Dr. E. S. Drucks
 Los Angeles County—
 Dr. E. O. Sawyer-----Los Angeles
 Alhambra-----Dr. F. E. Corey
 Arcadia-----Dr. Chas. E. Nordhoff
 Avalon-----K. W. Hidy
 Azusa-----Dr. L. W. Atkinson
 Burbank-----Dr. E. H. Thompson
 Claremont-----Dr. F. W. Thomas
 Compton-----J. W. Stone
 Covina-----Dr. J. D. Reed
 Eagle Rock-----Dr. C. H. Phinney
 El Monte-----Dr. S. L. Corpe
 Glendale-----Dr. R. E. Chase
 Glendora-----Dr. C. H. Wood
 Hermosa Beach-----B. F. Brown
 Huntington Park-----Dr. W. Thompson
 Inglewood-----Dr. H. A. Putnam
 Long Beach-----Dr. R. L. Taylor
 Lordsburg-----Dr. J. E. Hubble
 Los Angeles-----Dr. L. M. Powers
 Manhattan Beach-----E. M. Jenkins
 Monrovia-----Dr. J. L. Pomeroy
 Pasadena-----Dr. Stanley P. Black
 Pomona-----Dr. Will H. Holmes
 Redondo Beach-----Dr. D. R. Hancock
 San Fernando-----Dr. Benj. B. Ward
 San Gabriel-----Dr. Ruth Purcell
 San Marino-----
 Santa Monica-----Dr. Chas. G. Shipman
 Sawtelle-----Dr. W. O. Blanchar
 Sierra Madre-----Dr. R. H. Mackerras
 South Pasadena-----Dr. C. F. Metcalf
 Tropic-----Dr. Wm. C. Mabry
 Venice-----Dr. W. M. Kendall
 Vernon-----Dr. O. R. Stafford
 Watts-----
 Whittier-----Dr. W. H. Stokes
 Madera County—
 Dr. Dow H. Ransom-----Madera
 Madera-----Dr. L. St. John Hely
 Marin County—
 Dr. J. H. Kuser-----Novato
 Belvedere-----Dr. Florence Scott
 Larkspur-----Dr. J. E. McCue
 Mill Valley-----James V. Chase
 Ross-----Dr. Harry O. Hund
 San Anselmo-----Dr. O. W. Jones
 San Rafael-----Dr. W. J. Stone
 Sausalito-----Dr. A. H. Mays
 Mariposa County—
 Dr. J. M. Hicks-----Mariposa
 Mendocino County—
 Dr. Judson Liftchild-----Ukiah
 Fort Bragg-----Dr. L. C. Gregory
 Point Arena-----N. A. McCallum
 Potter Valley-----W. T. Eddie
 Ukiah-----Dr. J. Liftchild
 Willits-----Dr. F. C. Gunn